SONY

3-810-823-11(1)

Mini Hi-Fi Component System

Operating Instructions

COMPACT disc DIGITAL AUDIO

MHC-W77AV

©1996 by Sony Corporation

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

CAUTION
Do not, under any circumstances, place the CD player/Tape deck on top of the Amplifier/Tuner.

NOTICE FOR THE CUSTOMERS IN THE U. S. A.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Owner's Record
The model and serial numbers are located on the rear panel. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.
Model No. MHC-W77AV Serial No. _____

INFORMATION
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.

CAUTION
You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note on CATV system installer:
This reminder is provided to call CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

CAUTION
The use of optical instruments with this product will increase eye hazard.

NOTICE FOR THE CUSTOMERS IN CANADA

CAUTION:
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

Welcome!

Thank you for purchasing the Sony Mini Hi-Fi Component System. This series is packed with fun features. Here are just a few:

- A Dolby Pro Logic Surround* processor that lets you enjoy theater-like sound effects in your listening room
- A DBFB (Dynamic Bass Feedback) system that boosts low frequency range audio provide deep, powerful bass sound
- A preset feature, that lets you store and recall up to 30 of your favorite radio stations
- An amplifier that lets you adjust the audio quality to fit a variety of music types and environments
- A timer that lets you set the CD player, tape player or radio to turn on and off whenever you want
- A dual tape deck that lets you record from the radio, CD player or from the other tape deck and relay play from both decks
- A CD player that lets you play up to three CDs in a row and seamlessly advance (or reverse) through all the tracks on all the discs on the CD tray
- A music clip feature, that lets you create groups of favorite tracks from your CDs
- A remote that lets you control your system from your seat
- A loop play feature that lets you create a "sampler"effect when playing a CD.
- The MHC-W77AV consists of following things:
  — CD player/Tape deck: HCD-W55
  — Amplifier/Tuner: STR-W77
  — Speaker system: Front speaker SS-EX55P
  Center speaker SS-CN14
  Rear speaker SS-SR12

* Manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby", the double-D symbol ◻◻ and "Pro Logic" are trademarks of Dolby Laboratories Licensing Corporation.

Table of Contents

Chapter 1: Setting Up

Connecting the Stereo 4
Setting up the Speakers for Dolby Pro Logic Surround 6
Inserting the Batteries 6
Setting the Clock 6

Chapter 2: the CD Player

Playing CDs (normal play) 7
Playing Tracks in Random Order (shuffle play) 8
Playing Tracks in the Desired Order (program play) 9
Playing Tracks Repeatedly (repeat play) 9
Grouping Tracks (music clip) 10
Playing Tracks : Repeating a Specified Portion (loop play) 11

Chapter 3: the Radio

Listening to the Radio 12
Presetting Radio Stations 13
Playing Preset Radio Stations 13

Chapter 4: the Tape Player

Playing a Tape 14
Recording a CD 15
Recording a CD: Selecting Tape Length Automatically (tape select edit) 16
Recording a CD: Specifying Tape Length (time edit) 16
Recording a CD: Specifying Track Order (program edit) 17
Recording From the Radio 18
Recording From Another Tape (dubbing) 18

Chapter 5: Sound Adjustment

Adjusting the Sound 20
Selecting the Audio Emphasis 20
Adjusting the Audio Emphasis 21
Making a Personal Audio Emphasis File (personal file) 22

Chapter 6: Dolby Pro Logic Surround

What is Dolby Pro Logic Surround? 23
Connecting Video Equipment 23
Enjoying Dolby Pro Logic Surround Effects 24

Chapter 7: Additional Features

Falling Asleep to Music 25
Waking Up to Music 25
Timer-Recording Radio Programs 26
Microphone Mixing 27
Karaoke: Singing Along 27
Connecting Optional Equipment 27

For Your Information

Precautions 29
Troubleshooting Guide 29
Maintenance 30
Specifications 31
Index to Parts and Controls 32

Index 33

Chapter 1: Setting Up

Connecting the Stereo

Setting up the Speakers for Dolby Pro Logic Surround

Inserting the Batteries

Setting the Clock

Connecting the Stereo

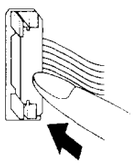
Use the illustrations below to connect your stereo.
If you want to connect any optional components to the stereo, see "Connecting Optional Equipment" in Chapter 7.

If you set up the stereo system vertically
Be sure to place the Amplifier/Tuner on top of the CD player/Tape Deck.

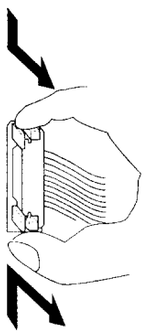
Caution
Place the main unit so that there are no obstructions blocking the ventilation duct on the rear panel.

STEP 1 Connecting the Flat Cords

Connect the supplied flat cords to SYSTEM CONTROL connectors of the same color by pressing the centre of the flat cord connector until it clicks into place.



To disconnect the flat cords
Pull out the flat cord connector while pressing in on the sides. Do not pull the flat cord itself.

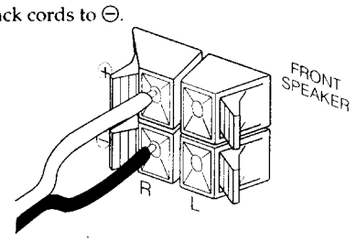


STEP 2 Connecting the Speakers

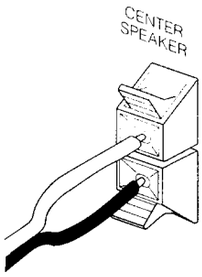
First prepare both ends of the speaker cables, then connect all speakers to the unit.

Before connecting the speakers
Twist the speaker cable coating and strip it from the end of the cable.

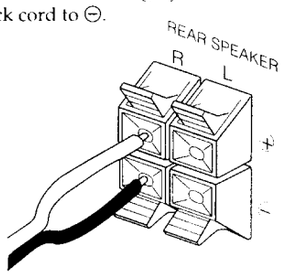
To connect the front speakers
Connect the right front speaker to the FRONT SPEAKER R connectors and the left front speaker to the FRONT SPEAKER L connectors with the red cords to ⊕ and the black cords to ⊖.



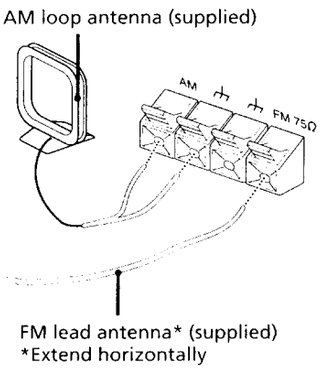
To connect the center speaker
Connect the center speaker to the CENTER SPEAKER + and CENTER SPEAKER – connectors with the gray cord to ⊕ and the black cord to ⊖.
To put the center speaker on your TV set, attach a foot (supplied) to each bottom corner of the speaker, and make sure that the speaker is completely flat on top of the TV.

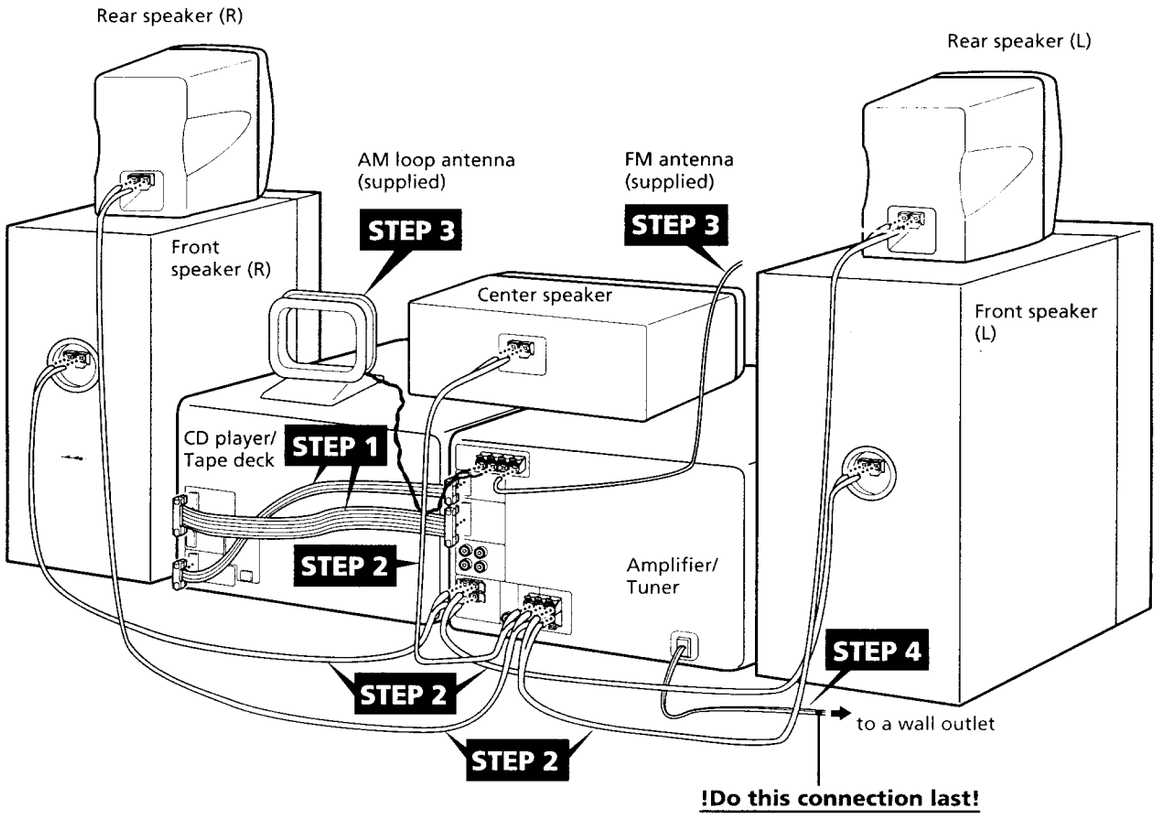


To connect the rear speakers
Connect the right rear speaker to the REAR SPEAKER R connectors and the left rear speaker to the REAR SPEAKER L connectors with the gray cord to ⊕ and the black cord to ⊖.

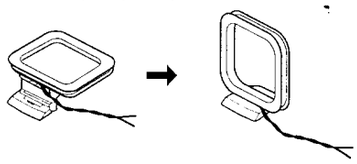


STEP 3 Connecting the Antennas



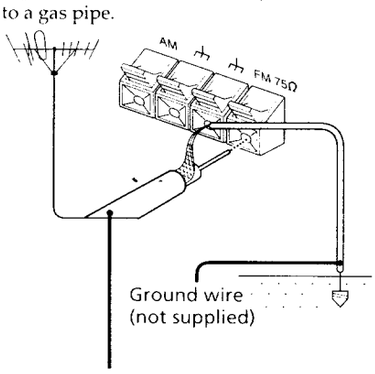


AM loop antenna connection
Connect the supplied loop antenna to the AM and the ⏚ terminal.



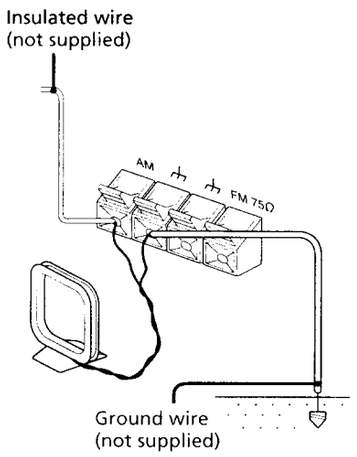
To improve the FM reception
Connect an outdoor FM antenna to the FM 75Ω and ⏚ terminals, using a 75-ohm coaxial cable.

Important
Ground the external antenna from ⏚ terminal against lightning. To prevent a gas explosion, do not connect the ground wire to a gas pipe.



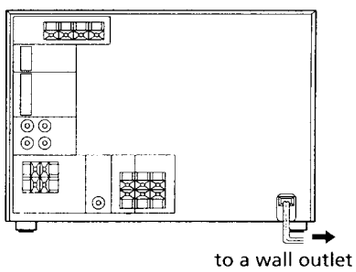
To improve the AM reception
After you connect the AM antenna, connect a 6- to 15-meter insulated wire to the AM terminal. Connect the ⏚ terminal to earth.

Important
Ground the external antenna against lightning from the ⏚ terminal. To prevent a gas explosion, do not connect the ground wire to a gas pipe.



STEP 4 Connecting the Power

Connect the AC power cord into a wall outlet after you have made all the above connections.

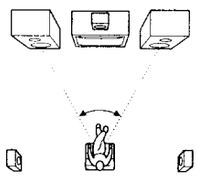


Demo Mode
The demo mode appears in the display when you plug the AC power cord into a wall outlet. The demo mode deactivates when you set the clock (see "Setting the Clock").

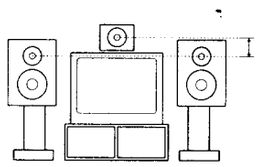
Setting up the Speakers for Dolby Pro Logic Surround

Proper speaker positioning is essential in order to achieve directional effects and diffused ambience, especially in the case of the surround speakers. Too much direct sound from the surround speakers can make their presence too obvious while too much diffusion may result in a directionless sound image. If it is not possible to locate the surround speakers in the preferred way, experiment with their positioning while keeping in mind the goal is to achieve a diffused and enveloping, but not overly vague, sound field.

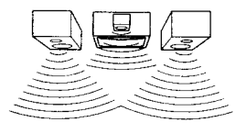
1 Position the left and right speakers so that they form a 45° angle with your listening/viewing position. The surround speakers should be mounted on the side walls as shown in step 4.



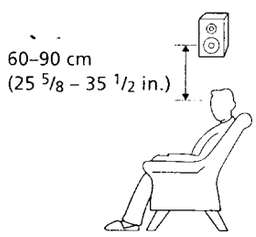
2 The two front speakers and a center speaker should be positioned as close to the same height as possible.



3 The center speaker should be positioned even with, or slightly behind the front left and right speakers.



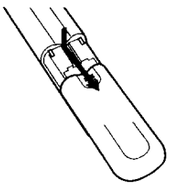
4 If possible, mount the surround speakers on the walls to the sides of your listening/viewing area, 60 to 90 cm above your seated position, facing each other.



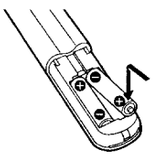
Inserting the Batteries

Install two R6 (size AA) batteries in the supplied remote for remote control.

1 Slide the lid to remove it.



2 Insert two R6 (size AA) batteries. Match the + and – to the diagram in the battery compartment.



3 Close the lid.

Battery life

You can expect the remote to operate for about six months (using Sony SUM-3 (NS) batteries) before the batteries run down. When the batteries no longer operate the remote, replace all the batteries with new ones.

To avoid battery leakage

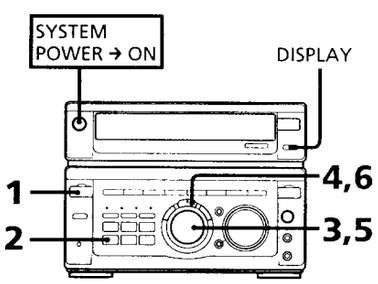
If you are not going to use the remote for a long time, remove the batteries to avoid damage caused by corrosion from battery leakage.

Setting the Clock

The built-in clock shows the time in the display even if the power is off.
Use the buttons on the unit to do this operation.

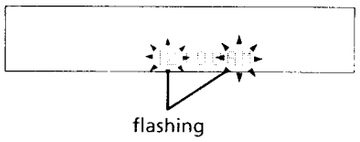
Note

Once you set the clock, the demo mode, that activates when the power is turned off, is cancelled automatically.

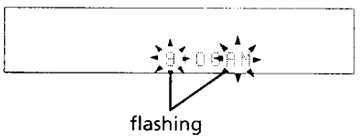


1 Press TIMER.
The stereo enters the clock/timer mode.

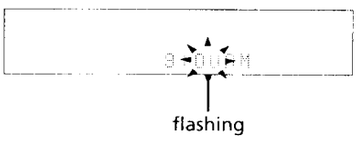
2 Press CLOCK SET.
The "AM" and hour indication begin flashing.



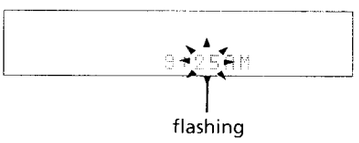
3 Set the current hour by turning the JOG dial until the correct hour appears.



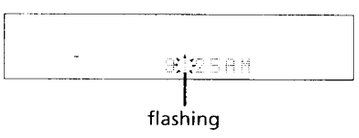
4 Press ENTER/NEXT.
The minutes indication begins flashing.



5 Set the current minute by turning the JOG dial until the correct minute appears.



6 Press ENTER/NEXT.
The clock starts running and the upper dot flashes. Use the time signal to set the clock accurately.
The upper dot flashes for the first half of a minute (0 to 29 seconds), and the lower dot flashes for the last half of a minute (30 to 59 seconds).



To check the time while power is on

Press DISPLAY a few times.
The current time is displayed for 8 seconds.

To correct the clock setting

Repeat steps 1 through 6.

Chapter 2: the CD Player

Playing CDs (normal play)

Playing Tracks in Random Order (shuffle play)

Playing Tracks in the Desired Order (program play)

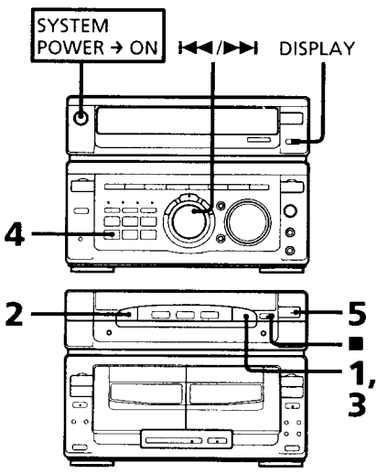
Playing Tracks Repeatedly (repeat play)

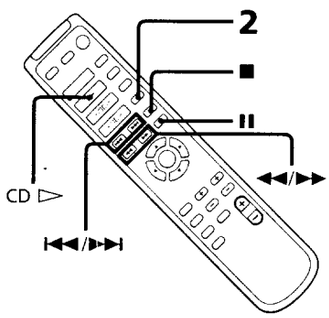
Grouping Tracks (music clip)

Playing Tracks: Repeating a Specified Portion (loop play)

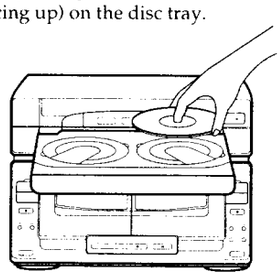
Playing CDs (normal play)

You can play all the tracks on up to three discs consecutively in their original order (normal play). Before you play the CD, decrease the sound level by turning the VOLUME control counter-clockwise, to prevent damage to the speakers.





1 Press ⏏ OPEN/CLOSE/EX-CHANGE and place up to two CDs (label side facing up) on the disc tray.



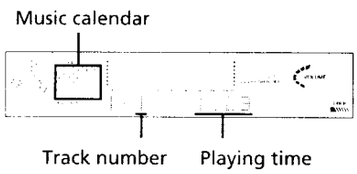
2 Press DISC SKIP (or D.SKIP on the remote) to insert a third disc, if necessary.
The disc tray rotates so you can insert another CD.

3 Press ⏏ OPEN/CLOSE/EX-CHANGE again to close the disc tray.

4 Press 1/ALL DISCS to choose "1 DISC" or "ALL DISCS".

Choose	To play
1 DISC	Only the CD you have selected.
ALL DISCS	All CDs consecutively in order of disc number. Empty disc trays are skipped.

5 Press ▷II (or CD ▷ on the remote). Play starts from the CD loaded on the tray whose button is lit green.



To	Press
Stop play	■
Pause	▷II (II*1)
Resume play	▷II (CD ▷*1 or II*1)
Go forward to another track	During play or pause, turn the JOG dial clockwise. Release when you reach the track you desire.*2 Or use ►►I on the remote.
Go back to a previous track	During play or pause, turn the JOG dial counterclockwise. Release when you reach the track you desire.*2 Or use I◄◄ on the remote.
Select a particular CD	Corresponding DISC 1 – 3 button*3 or press DISC SKIP repeatedly
Remove or exchange the CD	⏏ OPEN/CLOSE/EX-CHANGE

*1 Remote
*2 You can use the JOG dial to search quickly through tracks on different discs (seamless feature).
*3 If no disc is loaded at that number, the tray will emerge.

continue to next page →

→ continued

To find a point in a track

You can find a particular point in a track while the track is playing or while it's in pause mode. Use the buttons on the remote to operate this feature.

To	Press
Go forward quickly in a track	▶▶ on the remote and release it at the desired point.
Go backwards quickly in a track	◀◀ on the remote and release it at the desired point.
Search quickly without listening	❚❚, then press ◀◀ or ▶▶ on the remote. Press CD ▷ or ❚❚ again at the desired point.

To check the remaining time during playback

Press DISPLAY repeatedly.
Each time you press the button, the display changes as follows:

→Playing time on current track
↓
Remaining time on current track
↓
Remaining time on current CD* or "Play" display**
↓
Clock display (for eight seconds)
↓
Effect (or P FILE) name

* 1 DISC mode
** ALL DISCS mode

To check the total number of tracks and the total playing time

Press DISPLAY in stop mode. The total number of tracks and the total playing time appear in the display for four seconds.

Notes

- You cannot check the total playing time during program play.
- The disc number, total playing time and number of tracks also appear in the display when you press ⏏ OPEN/CLOSE/EX-CHANGE to close the disc tray.
- "--.--" appears in the display when the total playing time is 100 minutes or more.

One Touch Play feature

Press ▷❚❚ on the CD player (or CD ▷ on the remote) when the power is off. When a CD is in the player, you will be able to start listening to the CD without pressing any other buttons.

The Music Calendar Display

This display lights according to the number of tracks on the CD. As each track is played, the corresponding number disappears. Tracks numbered in excess of 20 are not displayed.

What the green and orange DISC 1–3 button indicators indicate

Indicators are provided on the DISC buttons for each of the respective disc trays (DISC 1–3).

- A green indicator shows that the tray is selected (either during playback or standby, or when the tray is open) no matter if there is a CD inside or not.
- An orange indicator shows that there is a CD on the tray but the tray is not selected.
- When the indicator is off, there is no CD on the tray and the tray is not selected.

Automatic Source Selection

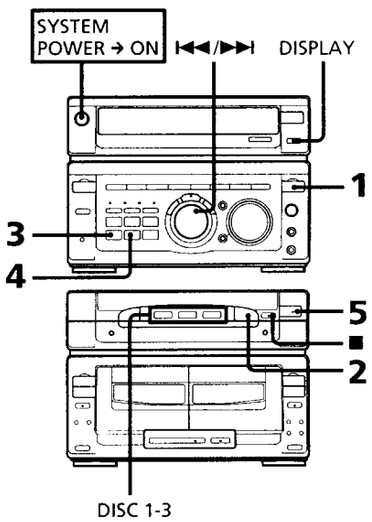
If the CD player has been in the normal play mode, you can select the CD player just by pressing ▷❚❚ or the DISC 1 – 3 buttons.
If the CD player has been in the program play or the shuffle play mode, only ▷❚❚ can be used for this function.

If there is no CD in the player

"NO DISC" appears in the display.
Press ▷❚❚ (or CD ▷ on the remote) while the indication is on, then the CD tray will open automatically.

Playing Tracks in Random Order (shuffle play)

You can play all the tracks on one CD or all CDs in random order.
Use the buttons on the unit to do this operation.



1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Place the CD(s) on the disc tray.

3 Press 1/ALL DISCS to choose "1 DISC" or "ALL DISCS".

4 Press PLAY MODE repeatedly until "SHUFFLE" appears in the display.

5 Press ▷❚❚.
"🔀" appears and then all the tracks play in random order.

To stop shuffle play

Press ■.

To cancel shuffle play

Press PLAY MODE repeatedly until "SHUFFLE" or "PROGRAM" disappears from the display. The tracks continue playing in their original order.

To select a desired CD

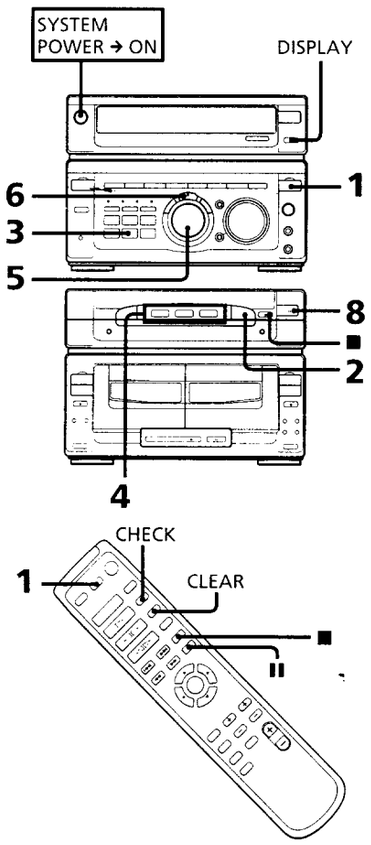
Press DISC 1 – 3 during shuffle play.

To skip an undesired track

Turn the JOG dial clockwise (or press ▶▶I on the remote).

Playing Tracks in the Desired Order (program play)

You can make a program of up to 32 tracks from all the CDs in the order you want them to be played.



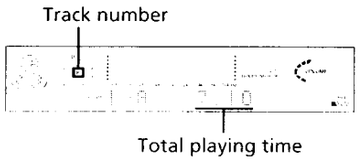
1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Place the CDs on the disc tray.

3 Press PLAY MODE repeatedly until "PROGRAM" and "DISC" appear in the display.

4 Press DISC 1–3 to choose a CD.

5 Turn the JOG dial to choose a track.
The track number and the total playing time appear.



6 Press ENTER/NEXT.
The chosen track number lights up in the music calendar. If the track number disappears before you press ENTER/NEXT, go back to step 5.

7 Repeat steps 5 and 6 to program additional tracks from same CD.
Repeat steps 4 to 6 to program additional tracks from another CD.

8 Press ▷II.
All the tracks play in the order you choose.

To	Press
Check the program	CHECK on the remote repeatedly*1
Program a pause	II on the remote*2
Stop play	■
Cancel program play	PLAY MODE*3 repeatedly until "PROGRAM" or "SHUFFLE" disappear.
Erase a track from the end	CLEAR on the remote in stop mode
Erase a specific track	CHECK on the remote repeatedly so that the number of the track lights up, and press CLEAR on the remote
Erase the entire program	■ once in stop mode or twice while playing

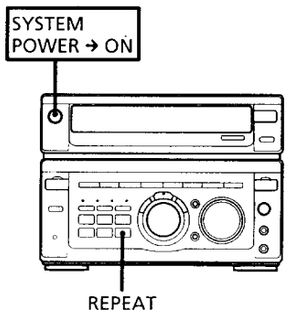
*1 After the last track appeared "CHECK END" appears in the display.
*2 "P" appears and the total playing time is reset to 0.00.
*3 The program is erased.

To change the order of programmed tracks
Erase the entire program and create a new one.

Notes
- The program you made remains in the CD player even after it has been played back. Press ▷II to play the same program again.
- If "--.--" appears instead of the total playing time during programming, this means:
  - you have programmed a track number which exceeds 20.
  - the total playing time has exceeded 100 minutes.

Playing Tracks Repeatedly (repeat play)

The repeat play function repeats a single CD or all CDs in normal play, shuffle play and program play.
Use the buttons on the unit to do this operation.



Repeating all the tracks
1 Press REPEAT a few times until "REPEAT" appears in the display.
2 Press ▷II.

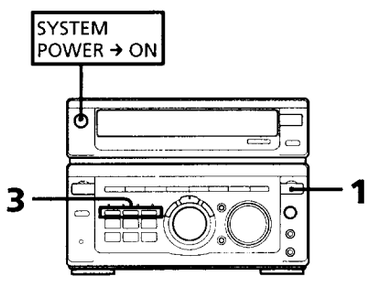
To	Press
Repeat all the tracks on the current CD	1/ALL DISCS repeatedly until "1 DISC" appears in the display.
Repeat all the tracks on all CDs	1/ALL DISCS repeatedly until "ALL DISCS" appears in the display.
Repeat only one track	REPEAT repeatedly until "REPEAT 1" appears in the display while playing the track you want to repeat.

To cancel repeat play
Press REPEAT so that "REPEAT" or "REPEAT 1" disappears from the display.

Grouping Tracks (music clip)

The music clip function is an easy way to create up to three arbitrary groups of tracks from your CDs. For example, you could store tracks for the morning in CLIP A, tracks to play for your friends in CLIP B, and tracks for relaxing in CLIP C.
Once you store one or more tracks in a music clip(s), the player recalls those tracks whenever you play the respective disc.

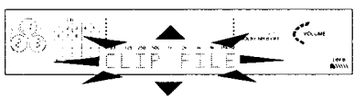
Storing Tracks in a Clip



1 Press FUNCTION until "CD" appears in the display.

2 Play the track you want to store, or (in stop mode) use the JOG dial to select the track you want.

3 Press a CLIP button (A, B, or C).
"CLIP FILE" appears and the selected CLIP indicator (A, B, or C) appears in the display. Normal playback continues.



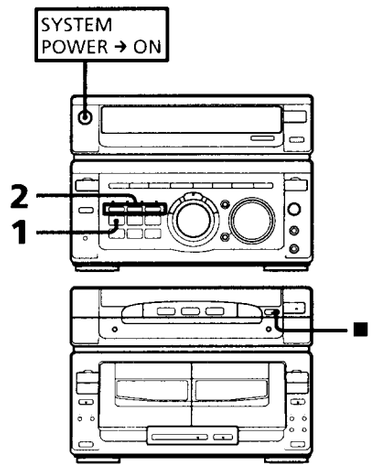
4 Repeat steps 2 and 3 to store other tracks into the same, or a different, clip.

If the memory becomes full
The clip data for the oldest clip is erased to make room for a new clip.

Notes
- Only tracks numbered 1 – 20 can be stored in music clips.
- In stop mode, you cannot store tracks in a music clip if "SHUFFLE" or "PROGRAM" is displayed.

Playing Tracks in a Clip (CLIP PLAY)

CLIP indicator(s) light in the display to let you know when clips are stored for a disc.



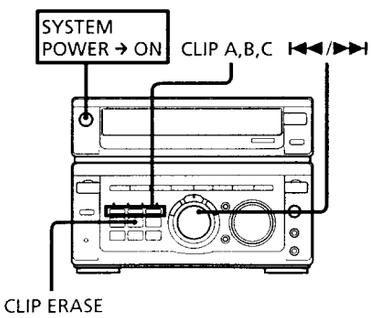
1 Press CLIP PLAY.

2 Press a CLIP button (A, B, or C).
"CLIP PLAY" appears in the display and the selected CLIP indicator lights. The player starts playing tracks from the selected clip.

To cancel clip play
Press ■.

Notes
- In 1 DISC mode, the tracks stored for the selected disc are played back once, then clip play is released.
- In ALL DISCS mode, all the tracks stored for the currently loaded discs are played back once, then clip play is released.
- You cannot start CLIP play if "PROGRAM" is displayed.

Erasing Tracks from a Clip

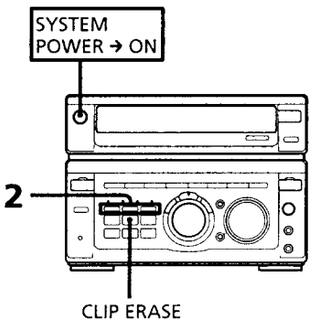


Erasing 1 track
1. Press CLIP PLAY.
2. Press the CLIP button (A, B, or C) for the clip containing the track you want to erase.
3. Use the JOG dial to select the track you want to erase.
4. Press CLIP ERASE.
"ERASE A - C" and "TRACK" appear alternately in the display.
5. Press the CLIP button (A, B, or C) you pressed in step 2 to erase the track.
"ERASE CLIP" appears in the display.

Erasing all the tracks
1. In stop mode, press CLIP ERASE.
"ERASE A - C" and "ALL" appear alternately in the display.
2. Press a CLIP button (A, B or C) to specify the clip you want to erase.

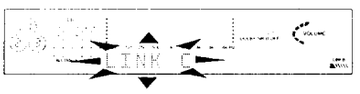
Storing Effects in a Clip

You can store one equalizer effect in each music clip. When you play the clip, the effect activates automatically, even if EFFECT ON/OFF is set to OFF.



1 Use the graphic equalizer and surround sound to adjust the sound as you desire (see "Sound Adjustment" in chapter 5).

2 Press and hold down a CLIP button (A, B, or C) to store the current equalizer and surround levels in the respective clip.
"LINK (A, B, or C)" appears in the display and the effect is stored in the clip.



To change the effect
Store a new effect. The previous effect is replaced by the new one.

To cancel the effect

1 Press and hold CLIP ERASE.
"SELECT A - C" and "LINK OFF" appear alternately in the display.
2 Press the CLIP button (A, B, or C) for the clip containing the effect you want to turn off.
"LINK (A, B, or C) OFF" appears in the display and the effect is erased from the clip.

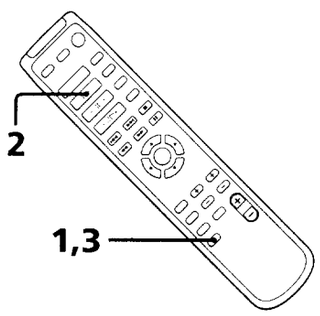
Playing Tracks: Repeating a Specific Portion (loop play)

You can use the loop function to repeat a specific section of a CD and create a "sampler" effect. You can also use the loop function when recording a CD. Use the buttons on the remote to do this operation.

EXAMPLE

Original part:
"Hey, come on everybody!"

When you use the loop function:
"Hey, come come come come come on everybody!"



1 In stop or pause mode, press LOOP repeatedly to select NORMAL or RHYTHM (see "What is the difference between NORMAL and RHYTHM?" for details).
There are five respective NORMAL and RHYTHM modes that provide different loop intervals. The display changes as follows:

NORMAL 1.....NORMAL 5
RHYTHM 5.....RHYTHM 1

The intervals become progressively larger (from 0.25 to 1.00 second) as the numbers increase.

2 Press CD ▻.

3 Hold down LOOP at the point you want to repeat. Release to resume normal playback.

What is the difference between NORMAL and RHYTHM?
NORMAL and RHYTHM resume normal playback from different points on the disc.

NORMAL:
Normal playback resumes from the same point where you started the loop.

RHYTHM:
Normal playback resumes from the point where you release the loop. The portion of the track equivalent to the time elapsed during the loop is skipped.

Chapter 3: the Radio

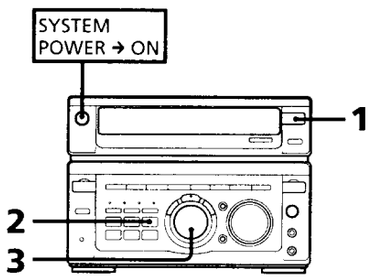
Listening to the Radio

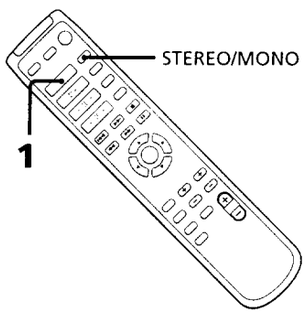
Presetting Radio Stations

Playing Preset Radio Stations

Listening to the Radio

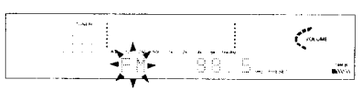
When you want to play a radio program, you can have the tuner automatically scan the radio frequencies and tune in the stations with clear signals. This feature saves you time in searching for stations with clear signals. However, stations with weak signals may be skipped by automatic tuning. Manually tune in the ones skipped by automatic tuning.





1 Press TUNER/BAND repeatedly until the band you want appears in the display.
As you press this button, the band changes as follows:

FM ⟷ AM



2 Press TUNING MODE repeatedly until "AUTO" appears in the display.

3 Turn the JOG dial clockwise to scan for higher frequency stations. To scan for lower frequency stations, turn the JOG dial counterclockwise.
The tuner starts scanning radio frequencies, and stops automatically when it finds a clear station.
"TUNED" appears in the display. "STEREO" also appears if the tuned FM station is broadcasting in stereo.

4 If you do not want to listen to the station selected, turn the JOG dial again to restart the scan.

When the desired station is not tuned in

Automatic tuning may skip stations with weak signals. Tune in the station manually.

1 Press TUNING MODE repeatedly until "MANUAL" appears in the display.
2 Keep turning the JOG dial until the desired station is tuned in.

To improve AM broadcast reception

Reorient the supplied AM loop antenna.

AM

To change the AM tuning interval

The AM tuning interval is preset to 10 kHz in the factory. If you need to change the interval, do as follows:

1 Turn on the power.
2 Change the band to AM.
3 Turn off the power.
4 Turn the power back on while pressing ENTER/NEXT.

After changing the AM tuning interval, reset the preset radio stations. To reset the interval to the factory setting, follow the same procedure.

When an FM program is not received clearly

Press STEREO/MONO on the remote so that "MONO" appears in the display. There will be no stereo effect, but the reception will improve. Press STEREO/MONO again to restore the stereo effect.

One Touch Play feature

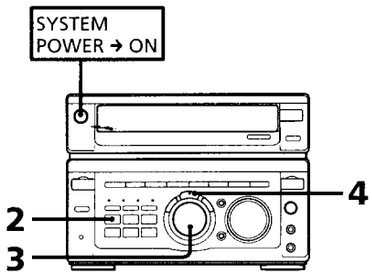
Press TUNER/BAND when the power is off. You will be able to start listening to the last received station without pressing any other buttons.

Automatic Source Selection

If you press TUNER/BAND while you are listening to other sound source, the tuner is selected and the last received station plays automatically.

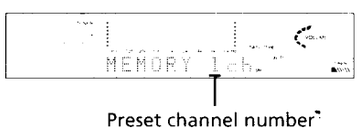
Presetting Radio Stations

You can store radio frequencies in the tuner's memory to tune in your favorite stations quickly. You can preset up to 20 FM stations and 10 AM stations in any order.
Use the buttons on the unit for presetting stations.



1 Tune in a station you want to store in the preset memory.

2 Press TUNER MEMORY.
"MEMORY" and the preset channel number appear in the display.



3 Turn the JOG dial to select a preset channel number.

4 Press ENTER/NEXT.
The station is stored at the preset number you selected.

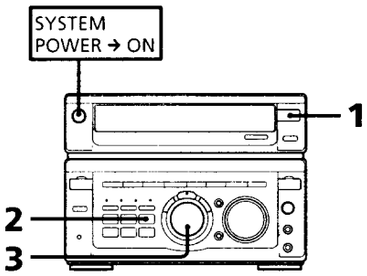
5 Repeat steps 1 to 4 for each station you want to store.

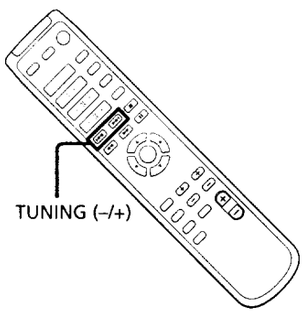
To erase a stored station
Store a new station at a previously used preset channel number. It will erase the old station and replace it with the new station.

If you have trouble storing a station or if you made a mistake
Make sure "MEMORY" is lit in the display. If not, press TUNER MEMORY again so that "MEMORY" appears in the display, and then proceed with steps 3 and 4.

Playing Preset Radio Stations

Once you have preset the stations, use the JOG dial to quickly tune in your favorite stations.

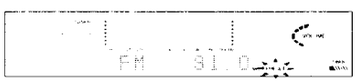




1 Press TUNER/BAND repeatedly to select the band you want.

FM ⟷ AM

2 Press TUNING MODE so that "PRESET" appears in the display.



3 Turn the JOG dial (or press TUNING (–/+) on the remote) to tune in a preset station.
The station frequency appears and the system begins receiving the stations.

Chapter 4: the Tape Player

Playing a Tape

Recording a CD

Recording a CD: Selecting Tape Length (tape select edit)

Recording a CD: Specifying Tape Length (time edit)

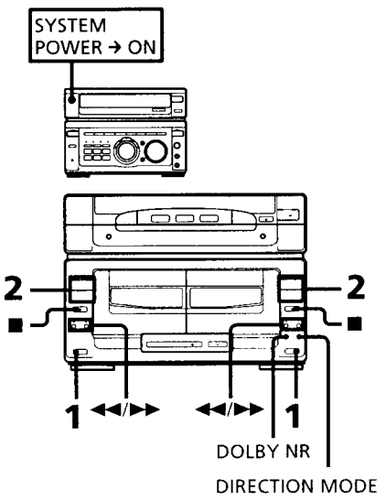
Recording a CD: Specifying Track Order (program edit)

Recording From the Radio

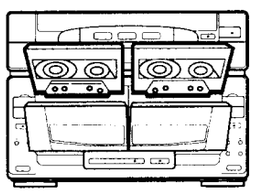
Recording From Another Tape (dubbing)

Playing a Tape

You can use TYPE I (normal), TYPE II (CrO_2) and TYPE IV (metal) tapes. When you insert a tape, the deck detects the tape type automatically.



1 Press ⏏ EJECT to open tape compartment.
Insert a recorded tape in deck A or B with the tape side facing down and the side you want to play facing forward.
Push to close the compartment.



2 Press ▷ (to play the front side) or ◁ (to play the reverse side).
The tape starts playing.

To play	Press DIRECTION MODE to select
One side of the tape	⇄
Both sides*	⇄
Both decks in succession**	RELAY

* The deck stops automatically after repeating the sequence five times.
** See "To play both decks in succession (relay play)".

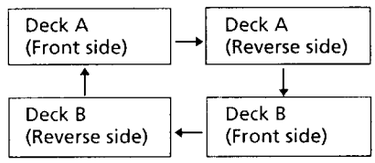
To	Press
Stop play	■
Pause	❚❚ PAUSE (Deck B only)
Resume play after pause	❚❚ PAUSE (Deck B only), ◁ or ▷
Fast forward	▶▶ for front side ◀◀ for reverse side
Rewind	◀◀ for front side ▶▶ for reverse side
Remove the cassette	⏏ EJECT

Using the remote

1 Press DECK A ◁/▷ or DECK B ◁/▷ to play the front side and press DECK A ◁/▷ or DECK B ◁/▷ again to play the reverse.
2 Press the desired operation button.

To play both decks in succession (relay play)

Relay play follows the sequence below. When the reverse side of the tape in deck B finishes playing, the sequence continues four more times.



1 Press ⏏ EJECT and insert recorded tapes in both decks.
2 Press DIRECTION MODE repeatedly until "RELAY" appears in the display.
3 Press ◁ or ▷ on either deck.
To stop relay play, press ■.

To cancel relay play

Press DIRECTION MODE repeatedly until "⇄" or "⇄" appears in the display.

When listening to a tape recorded with the Dolby* B-type noise reduction system

Press DOLBY NR button so that "DOLBY NR B" appears in the display.
The setting affects both decks. Dolby noise reduction system reduces tape hiss noise in low-level high-frequency signals.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

One Touch Play feature

Press ▷ or ◁ (or DECK A ◁/▷ or DECK B ◁/▷ on the remote) when the power is off. When a tape is in the player, you will immediately be able to listen to the tape without pressing any other buttons. If no tape is inserted, the system will just turn on.

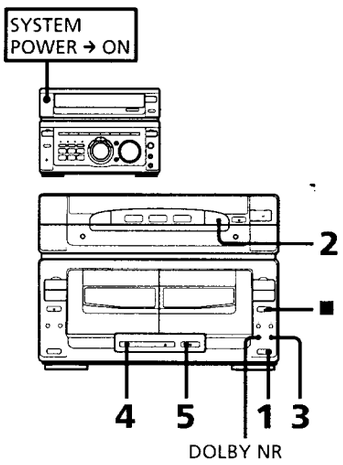
Automatic Source Selection
If you press ▷ or ◁ (or DECK A ◁/▷ or DECK B ◁/▷ on the remote) while you are listening to another sound source, the tape deck is selected and the play starts automatically.

Recording a CD

You can record from a CD to a tape. Use TYPE I (normal) or TYPE II (CrO_2) tapes. Do not use TYPE IV (metal) tapes for recording.
You cannot listen to other sources while recording.

Recording a CD Automatically

By using the CD SYNCHRO button, you can record from a CD to a tape easily. Use the buttons on the unit for this operation.



1 Press ⏏ EJECT and insert a blank tape into deck B with the side you want to record on facing forward.
Recording starts from the front side of the tape, unless you change the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

2 Press ⏏ OPEN/CLOSE/EX-CHANGE and place a CD.
Then, press ⏏ OPEN/CLOSE/EX-CHANGE again to close the CD tray.
If the indicator for the disc tray containing the CD you want to record is not lit green, press DISC SKIP repeatedly so that it lights green.

3 Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	⇄
Both sides*	⇄ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

4 Press CD SYNCHRO.
Deck B stands by for recording.

5 Press ❚❚ PAUSE to release recording pause.
Recording starts.
After about 10 seconds, the CD starts playing.

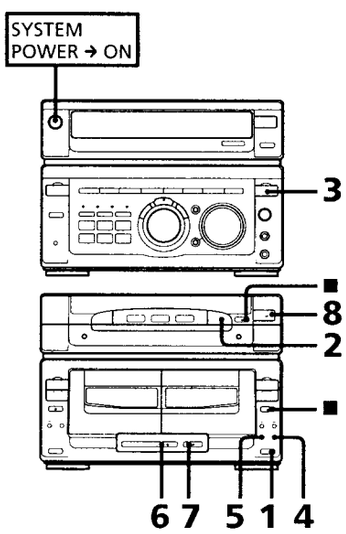
To stop recording
Press ■ on the tape player or the CD player.

To activate DOLBY NR
When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display after step 3.

To record with the surround effect
Press DSP so that "SUR 1 ", "SUR 2 ", or "SUR 3 " appears in the display.

Recording a CD Manually

You can record a CD as you like, for instance, record just the songs you want or record from the middle of the tape.



1 Press ⏏ EJECT and insert a blank tape into deck B with the side you want to record on facing forward.
Recording starts from the front side of the tape, unless you change the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

2 Press ⏏ OPEN/CLOSE/EX-CHANGE and place a CD.
Then, press ⏏ OPEN/CLOSE/EX-CHANGE again to close the CD tray.
If the button for the disc tray containing the CD you want to record is not lit green, press DISC SKIP repeatedly so that it lights green.

3 Press FUNCTION to select the CD player.

4 Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	⇄
Both sides*	⇄ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

5 When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display.

6 Press ● REC.
Deck B stands by for recording.

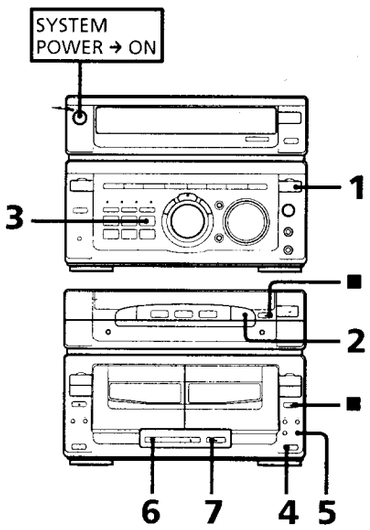
7 Press ❚❚ PAUSE to release recording pause.
Recording starts.

8 Press ▷❚❚ on the CD player.
The CD starts playing.

To	Press
Stop recording	■ on the tape player
Pause recording	❚❚ PAUSE
Stop CD play	■ on the CD player
Pause CD play	▷❚❚ on the CD player

Recording a CD: Selecting Tape Length (tape select edit)

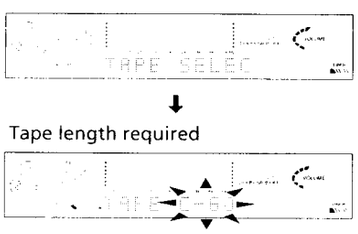
You can have the stereo system select and indicate the most suitable tape length for recording each disc automatically.
You cannot use Tape Select Edit for discs which contain 21 tracks or more.



1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Press ⏏ OPEN/CLOSE/EX-CHANGE and place a CD. Then, press ⏏ OPEN/CLOSE/EX-CHANGE again to close the CD tray.
If the button for the disc tray containing the CD you want to record is not lit green, press DISC SKIP repeatedly so that it lights green.

3 Press EDIT.
"TAPE SELECT" appears and the player divides the selections automatically.
Then the display changes as follows:



4 Insert a blank tape of the indicated length (or longer) into deck B.

5 Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	⇄
Both sides*	⇄ or RELAY

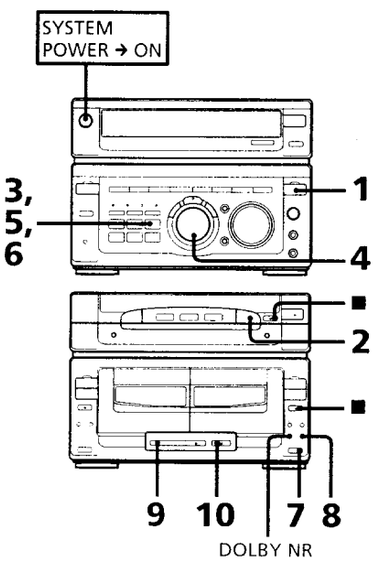
* Recording always stops at the end of the reverse side. Be sure to start from the front side.

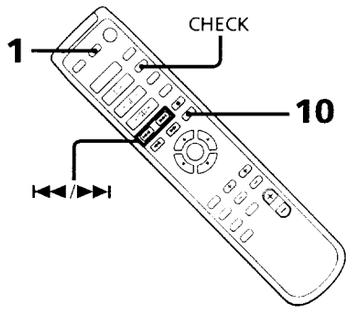
6 Press CD SYNCHRO.
Deck B stands by for recording.

7 Press ❚❚ PAUSE to release recording pause.
Recording starts.
After about 10 seconds, the CD starts playing.

Recording a CD: Specifying Tape Length (time edit)

You can have the stereo system create programs that will fit the tape length. For example, if you use a 40-minute tape to record a 46-minute CD, the CD player will automatically choose tracks that will fit within the 40-minutes, filling as much of the tape as possible. The player will not program those tracks beyond track number 20. Use the buttons on both the unit and the remote to do this operation.



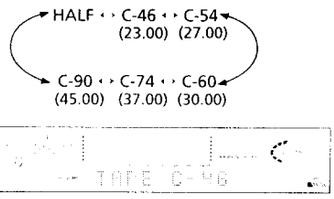


1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Press ⏏ OPEN/CLOSE/EX-CHANGE and place a CD.
Then, press ⏏ OPEN/CLOSE/EX-CHANGE again to close the CD tray.
If the button for the disc tray containing the CD you want to record is not lit green, press DISC SKIP repeatedly so that it lights green.

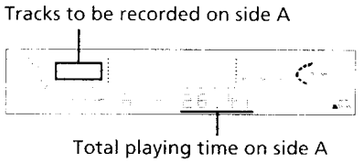
3 Press EDIT twice.
"TAPE SELECT" then "TIME EDIT" appear in the display.

4 Turn the JOG dial (or press ⏮ or ⏭ on the remote) to choose the indication that corresponds to the length (in minutes) of your tape.
The indications change as follows:



Choose "HALF" if you want the CD player to half of the total playing time of the CD. You cannot select "HALF" when recording CDs with more than 20 tracks.

5 Press EDIT.
The CD player determines the tracks to be recorded on side A automatically.



6 To record on both sides, press EDIT again. The CD player determines the tracks to be recorded on side B.
If you only want to record on side A, press ■ on the CD player to stop the flashing in the display.

7 Press ⏏ EJECT and insert a blank tape into deck B with the side you want to record on facing forward.
Recording starts from the front side of the tape, unless you change the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

8 Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	⇄
Both sides*	⇄ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

9 Press CD SYNCHRO.
Deck B stands by for recording.

10 Press ⏸ PAUSE to release recording pause.
Recording starts.
After about 10 seconds, the CD starts playing.

To stop recording

Press ■ on the tape player or the CD player.

To check the order

Press CHECK on the remote repeatedly.
Each time you press CHECK, the number of the programmed tracks appear in the display.

To cancel time edit

Press ■ on the CD player and then press PLAY MODE.

To select the desired tracks beforehand

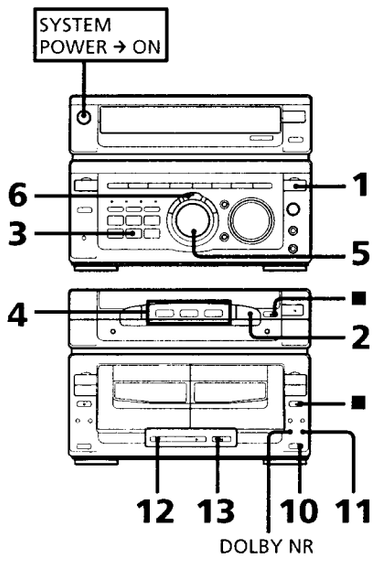
You can place priority on some tracks to be recorded by programming them first (up to 20 tracks). See "Playing Tracks in the Desired Order (program play)".

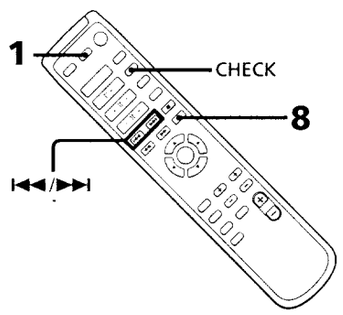
To activate DOLBY NR

When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display after step 8.

Recording a CD: Specifying Track Order (program edit)

You can adjust the total recording time to the tape length while making a program.





1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Press ⏏ OPEN/CLOSE/EX-CHANGE and place a CD.
Then, press ⏏ OPEN/CLOSE/EX-CHANGE again to close the CD tray.

3 Press PLAY MODE repeatedly until "PROGRAM" appears in the display.

4 Press DISC 1–3 to choose a CD.

5 Turn the JOG dial (or press I◄◄ or ►►I on the remote) to choose a track.

6 Press ENTER/NEXT.
The chosen track number lights up in the music calendar and is memorized. If the track number disappears before you press ENTER/NEXT, go back to step 5.

7 Program additional tracks for side A in the order you want them to be recorded. Repeat steps 5 and 6 to program from the same CD or steps 4 to 6 to program from another CD.

8 Press ⏸ on the remote to pause recording at the end of side A.
"P" appears in the display. The total playing time "0.00" is displayed.

9 Program additional tracks for side B in the order you want them to be recorded. Repeat steps 5 and 6 to program from the same CD or steps 4 to 6 to program from another CD.

10 Press ⏏ EJECT and insert a blank tape into deck B with the side you want to record on facing forward.
Recording starts from the front side of the tape, unless you change the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

11 Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	⇄
Both sides*	⇄ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

12 Press CD SYNCHRO.
Deck B stands by for recording.

13 Press ⏸ PAUSE to release recording pause.
Recording starts.
After about 10 seconds, the CD starts playing.

To stop recording

Press ■ on the tape player or the CD player.

To check the order

Press CHECK repeatedly.
Each time you press CHECK, the number of the programmed tracks appear in the display.

To cancel program edit

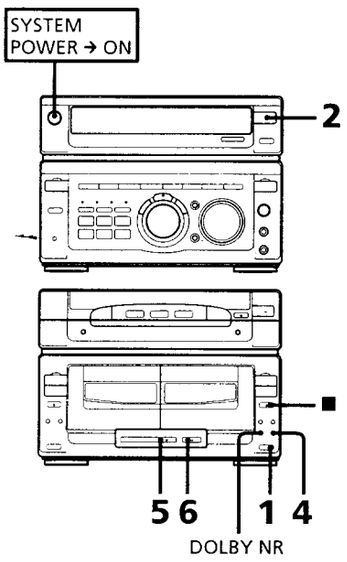
Press PLAY MODE repeatedly until "PROGRAM" or "SHUFFLE" disappears from the display.

To activate DOLBY NR

When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display after step 11.

Recording From the Radio

You can record from the tuner onto a tape. Use TYPE I (normal) or TYPE II (CrO_2) tape.



1 Press ⏏ EJECT and insert a blank tape into deck B with the side you want to record on facing forward.
Recording starts from the front side of the tape, unless you change the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

2 Press TUNER/BAND several times until the desired radio band appears.

3 Tune in the radio station you want to record. (See "Listening to the Radio", or "Playing Preset Radio Stations" for details.)

4 Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	⇄
Both sides*	⇄ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

5 Press ● REC.
Deck B stands by for recording.

6 Press ❚❚ PAUSE to release recording pause.
Recording starts.

To stop recording
Press ■ on the tape player.

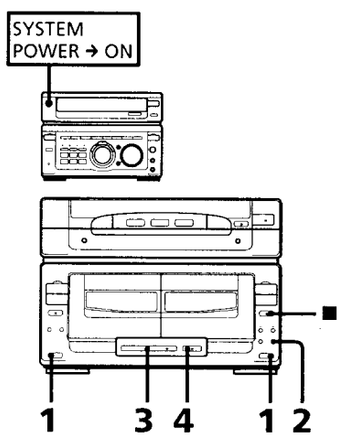
To reduce noise during AM recording
If a whistling noise is heard while recording, reorient the AM loop antenna for optimum reception.

To activate DOLBY NR
When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears in the display after step 4.

Recording From Another Tape (dubbing)

Dubbing Another Tape Automatically

You can record the whole tape onto another automatically by using high speed dubbing. Use the buttons on the unit to do this operation and TYPE I (normal) or TYPE II (CrO_2) tape for dubbing.



1 Press ⏏ EJECT and insert a recorded tape in deck A with the side you want to play facing forward.
Also, insert a blank tape in deck B with the side you want to record on facing forward.
Recording and playback start from the front side of the tape, unless you change the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

2 Choose how you want the tape to record and press DIRECTION MODE repeatedly until the desired mode appears.

Indication	Operation
⇄	Dubbing stops at the end of one side.
⇄	When the tape in one deck comes to the end of the front side, it reverses immediately regardless of the tape position in the other deck.
RELAY	When the tape in one deck reaches its end of the front side, it stops until the other tape come to its end, and then both tapes reverse together.

3 Press HIGH SPEED DUBBING.
Deck B stands by for recording.

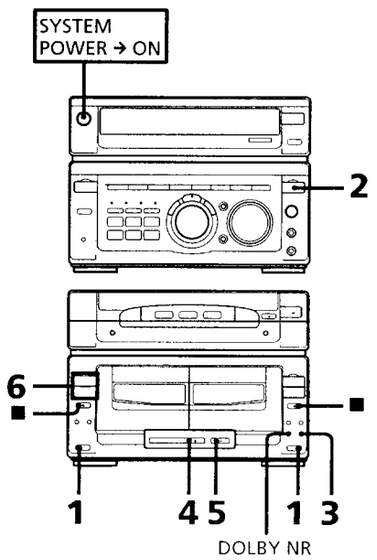
4 Press ❚❚ PAUSE.
The tape starts dubbing.
If you set DIRECTION MODE to ⇄ or RELAY, recording always stops at the end of the reverse side.

To stop dubbing
Press ■.

You do not have to press DOLBY NR with high speed dubbing
The tape in deck B is automatically recorded in the same state as the tape in deck A.

Dubbing Another Tape Manually

When you want to dub only part of the tape, dub manually at normal speed. Use TYPE I (normal) or TYPE II (CrO_2) tape for recording.



1 Press ⏏ EJECT and insert a recorded tape in deck A with the side you want to play facing forward.
Also, insert a blank tape in deck B with the side you want to record on facing forward.
Recording and playback start from the front side of the tape, unless you change the playing direction before recording.
Make sure the tabs on the cassette have not been removed.

2 Press FUNCTION repeatedly until "TAPE" appears in the display.

3 Select dual or single-sided recording.

To record	Press DIRECTION MODE to select
One side of the tape	⇄
Both sides*	⇄ or RELAY

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

4 Press ● REC.
Deck B stands by for recording.

5 Press ❚❚ PAUSE to release recording pause.
Recording starts.

6 Press ▷ or ◁ on deck A to start playback.

To stop recording
Press ■ on deck A and B.

Notes
- When dubbing tapes originally recorded with Dolby NR B, the dubbed tape is automatically recorded with Dolby NR B.
- When you want to record a tape recorded without Dolby NR B onto another tape using Dolby NR B, press DOLBY NR so that "DOLBY NR B" appears in the display before recording.

Chapter 5: Sound Adjustment

Adjusting the Sound

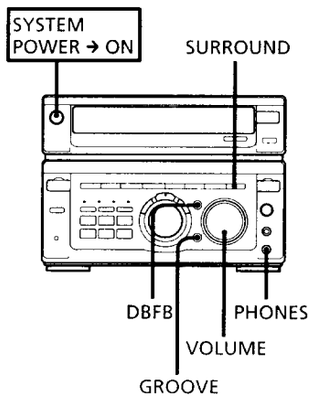
Selecting the Audio Emphasis

Adjusting the Audio Emphasis

Making a Personal Audio Emphasis File (personal file)

Adjusting the Sound

To fully enjoy the sound coming from your stereo system, make the following audio adjustments. See the following sections for additional sound adjustments.



To adjust the volume
Turn VOLUME on the unit or press VOL (+/–) on the remote.

To reinforce the bass
Press DBFB* to choose either DBFB ▂ or DBFB ▂▃▅▇.
The display changes as follows:

display off → DBFB ▂ → DBFB ▂▃▅▇

"DBFB ▂▃▅▇" is more effective than "DBFB ▂".

*. DBFB = Dynamic Bass Feedback

If you use the Dynamic Bass Feedback System with the graphic equalizer
If the bass is too strong, the music will sound distorted. Adjust the bass slowly while listening to music so that you can monitor the effect of the adjustment.

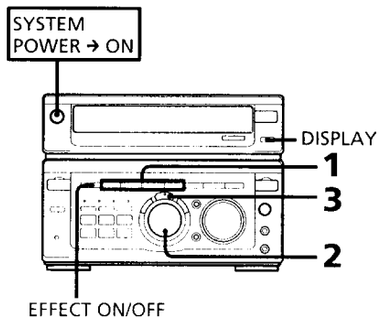
To get a powerful sound (GROOVE)
Press GROOVE.
The volume switches to power mode, DBFB is automatically set to full strength, the equalizer curve changes, and the "GROOVE" button lights up. Press GROOVE again to return to the previous volume.

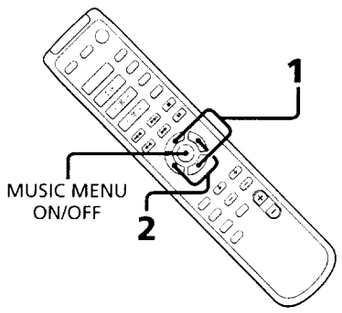
Note
- Cancelling GROOVE does not cancel the DBFB level or equalizer curve. To cancel the DBFB level, press DBFB repeatedly until "DBFB ▂▃▅▇" or "DBFB ▂" disappears from the display. Adjust the equalization to obtain the effect you desire.

To listen through the headphones
Connect the headphones to PHONES jack. No sound will come from the speakers.

Selecting The Audio Emphasis

Your stereo system is provided with 20 different preset effects (music menu) created from different graphic equalizer and surround effect settings.
With the press of a single button, you can choose between a variety of effects according to musical genre or use. The personal file function (see "Making a Personal Audio Emphasis File (personal file)") lets you store your own effects.





1 Press one of the MENU buttons (or MUSIC MENU ▲/▼ on the remote repeatedly) to select MENU.
See the chart "Music menu Options" on the following page. The last effect chosen from that menu appears in the display.

2 Use the JOG dial (or press MUSIC MENU ◄/► on the remote repeatedly) to select the preset you desire.
The preset name appears in the display.

3 Press ENTER/NEXT.
You do not need to press this button when you use the remote.

To cancel the effect
Press EFFECT ON/OFF (or MUSIC MENU ON/OFF on the remote) so that "EFFECT OFF" appears in the display.

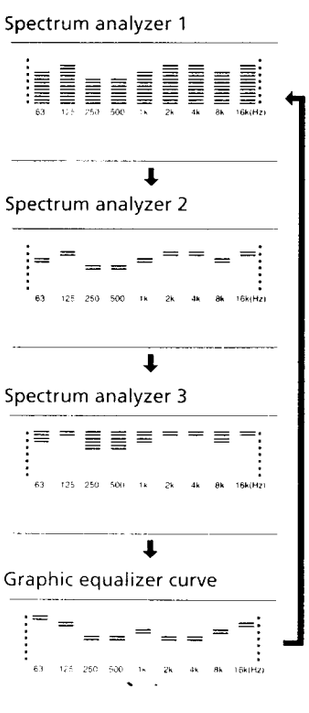
Music menu options

"SUR 1 ", "SUR 2 " or "SUR 3 " appears if you select an effect with surround effects.

MENU button	Effect	For
MENU 1	ROCK POPS JAZZ CLASSIC DANCE	standard music sources
MENU 2	SALSA REGGAE BALLADE OLDIES SOUL	
MENU 3	GAME MOVIE NIGHT MORNING PARTY	listening situations
MENU 4	L-HALL STADIUM STUDIO CHURCH CLUB	special listening situations

To change the equalizer display

Each time you hold down DISPLAY for a few seconds, the equalizer display changes to show one of the following displays.



Adjusting the Audio Emphasis

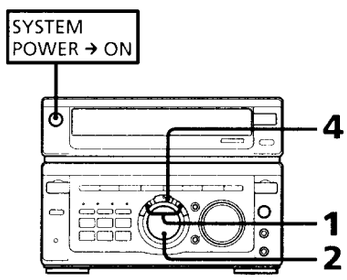
You can adjust the audio emphasis using the following two functions:

- Graphic Equalizer
- Surround Effect

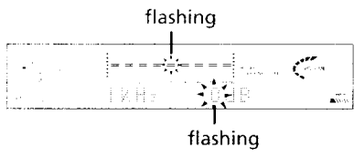
Adjusting the Sound (graphic equalizer)

You can adjust the sound by raising or lowering the levels of specific frequency ranges.

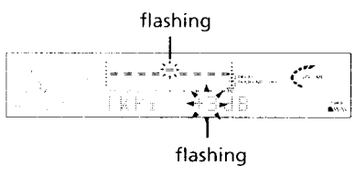
Before operation, first select the audio emphasis you want for your basic sound.



1 Press FREQUENCY + or – to select a frequency band.



2 Turn the JOG dial to adjust level.



3 Repeat steps 1 and 2.

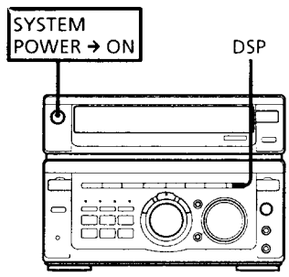
4 Press ENTER/NEXT when finished.
The equalizer disappear from the display but you can hear the effect of the adjustments.

Note

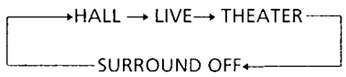
- If you choose another menu audio emphasis (other than "EFFECT OFF") the adjusted sound effect is lost. To retain the adjusted sound effect for future use, store it in a personal file. (See "Making a Personal Audio Emphasis (personal file)".)

Activating the Sound Field (surround effect)

You can adjust the surround effect. First select from three types of programmed surround effects according to the type of software you have.

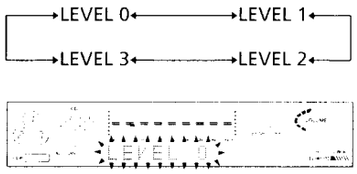


1 Press DSP (or press DSP MODE on the remote) repeatedly until the surround effect you desire appears in the display.

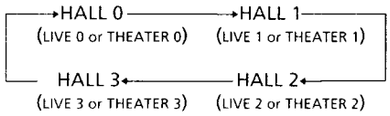


HALL (SUR 1)	Natural acoustic reverberations similar to those produced in a large-size concert hall.
LIVE (SUR 2)	Provides a sense of presence similar to a live concert.
THEATER (SUR 3)	Provides a sense of presence similar to a movie theater.

2 Hold down DSP for more than a second and turn the JOG dial to choose the surround level you want.
The display changes as follows:



When using the remote, press DSP LEVEL to choose the surround level.
The display changes as follows:



The surround effect becomes stronger as the level number increases.

3 Press ENTER/NEXT.

continue to next page →

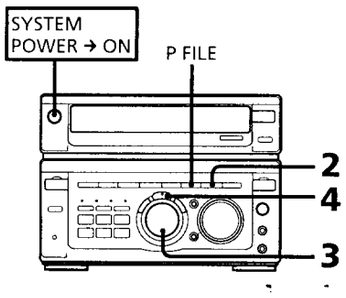
→ continued

Note

When you choose other sound effects, the surround effects will be cancelled. If you want to memorize the effect, store it into a personal file (see "Making a Personal Audio Emphasis File (personal file)").

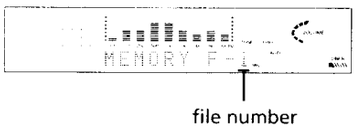
Making a Personal Audio Emphasis File (personal file)

You can create a personal file of audio patterns and store them in the memory of the graphic equalizer. Later, call up an audio pattern to play a favorite tape, CD, or radio program. Create up to five audio files. Before operation, first select the audio emphasis you want for your basic sound.



1 Obtain the sound effect you want by using the graphic equalizer and surround effect.

2 Press MEMORY.
The personal file number appears in the display.



3 Use the JOG dial to select the file number (P FILE) where you want to store the sound effect.

4 Press ENTER/NEXT.
The adjusted sound effects are stored under the selected file number. The settings previously stored at this memory location are erased and replaced by the new settings.

To call up the personal file

1 Press P FILE (or MUSIC MENU ▲/▼ on the remote repeatedly until personal file appears).
The last selected personal file appears in the display.

2 Use the JOG dial (or press MUSIC MENU ◀/▶ on the remote) to select the personal file you desire.

3 Press ENTER/NEXT.

Chapter 6: Dolby Pro Logic Surround

What is Dolby Pro Logic Surround ?

Connecting Video Equipment

Enjoying Dolby Pro Logic Surround Effects

What is Dolby Pro Logic Surround ?

New Dolby Surround standard

Dolby Surround is basically a home theater audio system. Dolby Pro Logic Surround is a new standard from Dolby Laboratories Licensing Corporation. It improves sound image by using four separate channels: off-screen audio effects, on -screen dialogue, left-to-right panning, and music.
This provides greatly improved directional accuracy, especially in the case of movie sound effects. You can feel as if you were in the scene. The Dolby Pro Logic Surround can be set to the one of three modes depending on the arrangement of your speaker system: NORMAL, 3CH LOGIC and PHANTOM. The low bass sound will come out from the left and right front speakers.
We thank Dolby Laboratories Licensing Corporation for its unique directionality emphasis circuitry.

What is Pro Logic?

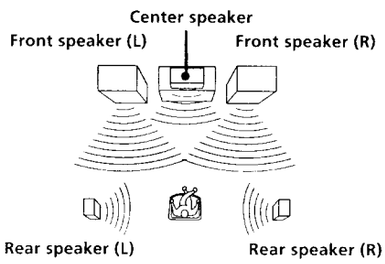
Pro Logic is a form of playback system. It uses professional decoder technology for movie creators to re-create the sound field of a two-channel Dolby Surround signal.

Dolby Pro Logic Surround Modes

You can select one of the following three modes, depending on the arrangement of your speaker system. After deciding the Pro Logic mode, select the same one in "Adjusting the Sound Level of Speakers".

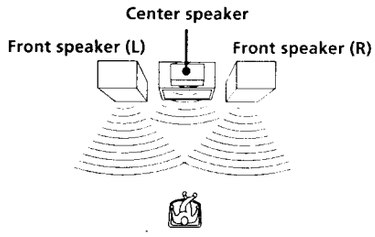
NORMAL mode

Select this mode when using rear speakers and a small center speaker such as those provided with this system. Since a small speaker cannot reproduce a full bass sound, the low bass sound on the center channel is output through the front left and right speakers.



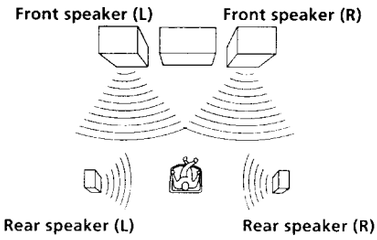
3CH (channel) LOGIC mode

Select this mode when using only front and center speakers. The sound for the rear channel is output through the front left and right speakers.



PHANTOM mode

Select this mode when you are not using a center speaker. The sound for the center channel is output from the front left and right speakers.



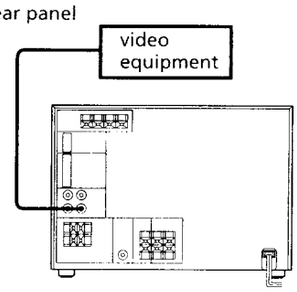
Connecting Video Equipment

Before enjoying the Dolby Pro Logic Surround, you need to connect video equipment to your stereo system.

Connecting One Piece of Video Equipment

Use an audio connecting cable and make sure to connect the plugs to jacks of the same color.

rear panel



Connect	With
AUDIO OUT jacks of the video equipment	VIDEO/MD IN jacks

continue to next page →

→ continued

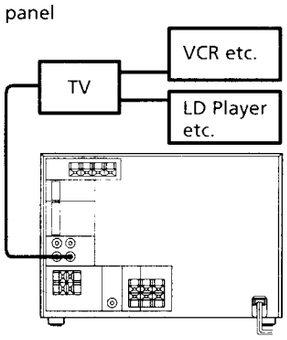
Press FUNCTION repeatedly until "VIDEO" appears in the display.

The sound from the video equipment comes through the speakers. You can also record the sound from the video equipment.

Connecting Two or More Pieces of Video Equipment at the Same Time

Use an audio connecting cable and make sure to connect the plugs to jacks of the same color.

rear panel



Connect video equipment to the TV. For more details concerning the connections, refer to the operation manuals of the video and the TV.

Connect	With
AUDIO OUT jacks of the TV	VIDEO/MD IN jacks

Select the input source for the desired equipment using the TV's input selector. Then press FUNCTION repeatedly until "VIDEO" appears in the display.

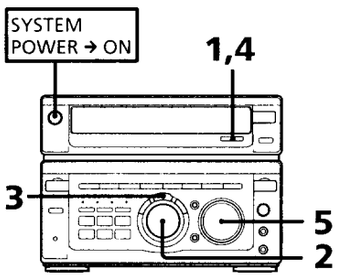
The sound from the video equipment comes through the speakers. You can also record the sound from the video equipment.

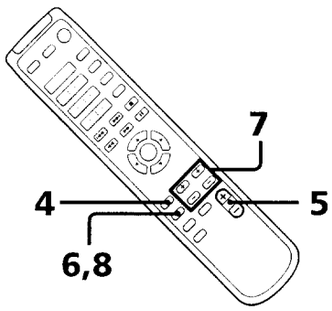
Enjoying Dolby Pro Logic Surround Effects

To make the Dolby Pro Logic Surround effects work, you need to use video tapes or Laser discs etc. that carry the Dolby "DOLBY SURROUND" or "DOLBY SURROUND PRO LOGIC" logo.

Adjusting the Sound Level of Speakers

To enjoy Dolby Pro Logic Surround effects, adjust the volume levels of the front, center and rear speakers by using the test tone.





1 Press and hold down DOLBY PRO LOGIC for more than a second.

2 Turn the JOG dial to choose the Dolby Pro Logic Surround mode you want. The display changes as follows:

→NORMAL↔3CH LOGIC←
→PHANTOM←

For details on each mode, see "Dolby Pro Logic Surround Modes" of this chapter.

3 Press ENTER/NEXT.

4 Press DOLBY PRO LOGIC (or PRO LOGIC ON/OFF on the remote).

5 Turn VOLUME (or press VOLUME (+/–) on the remote) so that the volume for the front speakers is set to your normal listening volume.

6 Press TEST TONE on the remote. The test tone is automatically output from each speaker in the sequence shown below.

NORMAL mode

→Front left ——→Center
Rear←—— Front right←

3ch LOGIC mode

→Front left ——→Center
Front right←

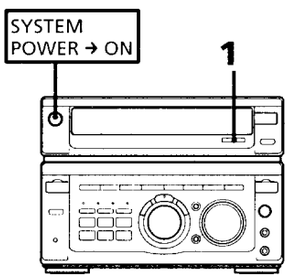
PHANTOM mode

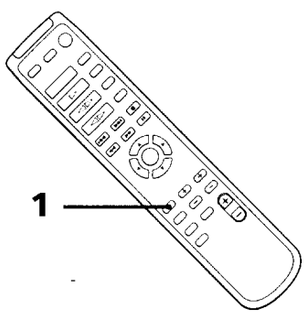
Front←→Rear

7 While sitting in your normal listening position, adjust the volume using CENTER LEVEL +/– and REAR LEVEL +/– on the remote so that the volume level of each speaker is at the same level. (When you turn VOLUME (or press VOLUME (+/–) on the remote), the volume changes for all speakers.)

8 After you have finished making all adjustments, press TEST TONE to shut off the test tone.

Enjoying Dolby Pro Logic Surround Effects





1 Press DOLBY PRO LOGIC (or press PRO LOGIC ON/OFF on the remote).

To turn off Dolby Pro Logic Surround

Press DOLBY PRO LOGIC (or PRO LOGIC ON/OFF on the remote).

Notes

- Turn off Dolby Pro Logic Surround when recording.
- The audio emphasis will be cancelled automatically when you turn on the Dolby Pro Logic Surround.

Chapter 7:

Additional Features

Falling Asleep to Music

Waking up to Music

Timer-Recording Radio Programs

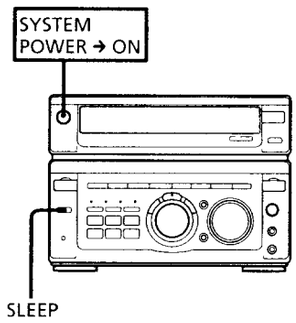
Microphone Mixing

Karaoke: Singing Along

Connecting Optional Equipment

Falling Asleep to Music

You can set the stereo system to turn off automatically so you can go to sleep to music (sleep timer).
Before setting the sleep timer, make sure the clock has been set correctly.



1 Play your favorite sound source (a tape, the tuner or a CD).

2 Press SLEEP repeatedly to choose how long you want the music to play.
The sleep time indication appears in the display.

AUTO → 90 → 80 ... 10 → OFF

The minute indication sets the timer to turn the power off after 90 to 10 minutes in ten minute intervals.

When you choose AUTO
The power turns off when the current CD or tape finishes playback (for up to 100 minutes). The power will also turn off, even if you fast forward or rewind the tape.

To cancel the sleep timer
Press SLEEP repeatedly until "OFF" appears in the display.

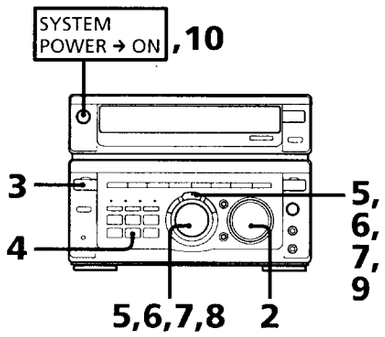
To check the remaining time before the sleep timer turns off the system
Press SLEEP once.
The remaining time (in minutes) is displayed for several seconds.

To change the remaining time while the sleep timer is on
Press SLEEP repeatedly to select the remaining time you desire.

To turn off the system before the sleep timer turns off the system
Press SYSTEM POWER.

Waking Up to Music

You can wake up to music at a preset time. You only need to set the timer once. When you select the CD player as the sound source, you can play a CD in any mode (normal, shuffle, or program). Before setting the timer, make sure the clock has been set correctly.



1 Prepare the sound source.

To wake up to the radio
Tune in the preset station you want.

To wake up to a CD
Insert a CD. If you want it to play from a specific track, do the necessary procedures for programmed CD play (see "Playing Tracks in the Desired Order (program play)").

To wake up to a tape
Insert the tape with the side you want to play facing forward. If you insert the tapes in both decks, you hear the sound from deck A.

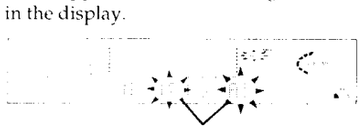
To wake up to an MD
Insert an MD. Press FUNCTION to select "MD". If you cannot select "MD" by pressing FUNCTION, select "VIDEO" and turn the power off. Press SYSTEM POWER while holding down ENTER/NEXT and "VIDEO" will be switched to "MD".

2 Turn VOLUME to adjust the volume.

3 Press TIMER.

4 Press TIMER SET.

5 Use the JOG dial to select either DAILY 1 or 2 and press ENTER/NEXT.
"ON" appears and the hour digits flash in the display.



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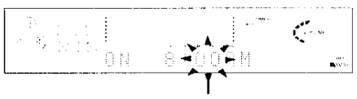
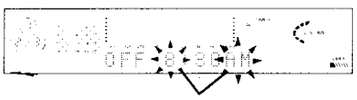
6 Use the JOG dial to set the hour you want the system to turn on and press ENTER/NEXT.
Set the minutes in the same way. "OFF" appears and the hour digits flash in the display.



flashing



flashing

7 Use the JOG dial to set the hour you want the system to turn off and press ENTER/NEXT.
Set the minutes in the same way.

8 Use the JOG dial to select a sound source.
The display changes as follows:

TUNER ⟷ TAPE PLAY ⟷
CD PLAY ⟷ MD PLAY ⟷

9 Press ENTER/NEXT.
The preset items appear in the display sequentially.

10 Press SYSTEM POWER to turn off the system.
At the preset time, the power will go on at the preset time and the music will play. At the turn-off time, the power will go off again.

To change the preset timer settings
Start over from step 1.

To check the preset timer settings
1 Press TIMER.
2 Press TIMER SELECT and use the JOG dial to choose the mode you want to check.
3 Press ENTER/NEXT.
The preset items appear in the display sequentially, then the original display returns.

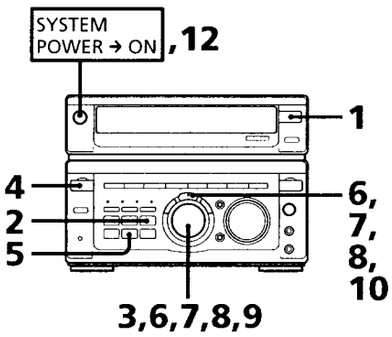
To change the timer
Select the timer display you desire in step 2 of "To check the preset timer settings".

To cancel the timer
1 Press TIMER.
2 Press TIMER SELECT and use the JOG dial to choose "TIMER OFF."
3 Press ENTER/NEXT.
The next time you want to use the timer, select the timer display you used in step 2 (DAILY1 or DAILY 2) and press ENTER/NEXT.

Notes
- You cannot set the timer if the timer ON and OFF times are the same.
- You cannot activate wake-up timer and timer-recording at the same time.
- Previous wake-up timer and rec timer settings will be cancelled if you change the VIDEO function to MD in step 1. The same thing happens when you change the MD function to VIDEO again.

Timer-Recording Radio Programs

You can set the timer to record from the radio at a certain time. This timer works only once for each setting. The volume level is automatically set to MIN.
You can record with a Sony MD deck with AU BUS. Be sure to connect the MD deck to the AU BUS jack, and press FUNCTION to select "MD".
Make sure the clock has been set correctly.



1 Press TUNER/BAND repeatedly until the band you want appears in the display.

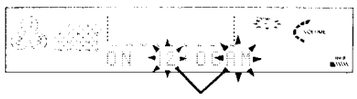
2 Press TUNING MODE repeatedly until the PRESET indicator lights up.

3 Use the JOG dial to tune in a preset station.

4 Press TIMER.

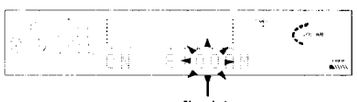
5 Press TIMER SET.

6 Use the JOG dial to select "REC" and press ENTER/NEXT.
"ON" appears and the hour digits flash in the display.

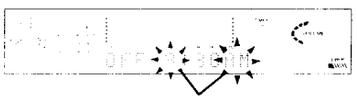


flashing

7 Use the JOG dial to set the hour you want the system to turn on and press ENTER/NEXT.
Set the minutes in the same way. "OFF" appears and the hour digits flash in the display.



flashing

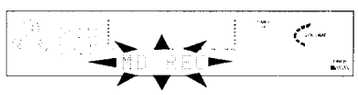


flashing

8 Use the JOG dial to set the hour you want the system to turn off and press ENTER/NEXT.
Set the minutes in the same way.

9 Use the JOG dial to select the recording equipment.
The display changes as follows:

TAPE REC ⟷ MD REC



10 Press ENTER/NEXT.
The preset items appear in the display sequentially.

11 Prepare the recording equipment.

To record on a tape
Insert a tape into deck B.
If necessary, select the direction mode and Dolby NR.

To record on an MD
Insert a mini disc into the MD deck.

12 Press SYSTEM POWER to turn off the system.
The power comes on 15 seconds before the preset time and the volume is automatically set to MIN.

Notes
- The timer operation actually starts 15 seconds before the timer ON time. If you perform another operation at during period, the timer operation may not be performed correctly.
- If you cannot select "MD" by pressing FUNCTION, select "VIDEO" and turn the power off. Press SYSTEM POWER while holding down ENTER/NEXT and "VIDEO" will be switched to "MD".

To check the preset times settings

1 Press TIMER.
2 Press TIMER SELECT and use the JOG dial to select "REC".
3 Press ENTER/NEXT.
The preset items appear in the display sequentially, then the original display returns.

To change the preset timer settings

Start over from step 1.

To cancel the timer

1 Press TIMER.
2 Press TIMER SELECT and use the JOG dial to choose "TIMER OFF."
3 Press ENTER/NEXT.
The timer indicators disappear from the display.

When a power interruption occurs

The clock and timer settings are all erased, and "12:00 AM" will flash in the display.

If the power is on at the preset time

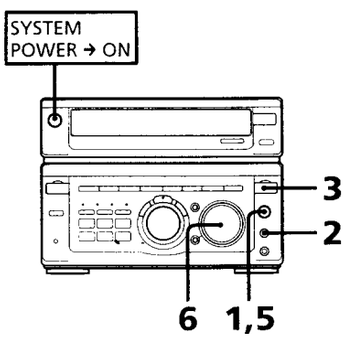
The sound source will automatically change to the tuner, but tuner recording will not start.

Notes

- You cannot set the timer if the timer ON and OFF times are the same.
- You cannot activate wake up timer and timer-recording at the same time.
- Previous wake-up timer and rec timer settings will be cancelled if you change the VIDEO function to MD in step 1. The same thing happens when you change the MD function to VIDEO again.

Microphone Mixing

You can "mix" sounds by playing one of the components and singing or speaking into a microphone (not supplied). The mixed sounds can then be recorded on a tape.



1 Turn MIC LEVEL to MIN to turn down the microphone control level.

2 Connect a microphone at the MIX MIC jack.

3 Press FUNCTION several times to select a sound source and play it.

4 Sing or speak into the microphone.

5 Adjust the microphone volume level using MIC LEVEL.

6 Adjust VOLUME.
If you hear acoustic feedback, move the microphone away from the speakers or change the direction of the microphone.

7 If you want to record the mixed sound, insert a tape in deck B and start recording.

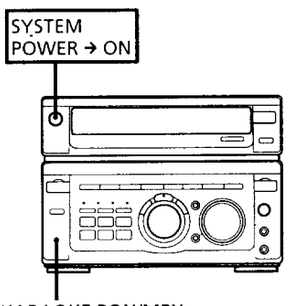
To record from the microphone only

1 Press FUNCTION repeatedly until "CD" appears in the display. If a CD is being played, press ■ on the CD player to stop playing.
2 Start recording.
3 Sing or speak into the microphone.

When you finish mixing

Turn the MIC LEVEL control to MIN and disconnect the microphone.

Karaoke: Singing Along



To Reduce the Vocals (Karaoke pon)

You can minimize the singer's voice, "vocal reduction," so you can sing along with any stereo CD or tape. When you want to record the sound of the CD or tape and your voice, operate steps below, then operate "Microphone Mixing".

To reduce the vocals

Press KARAOKE PON/MPX so that "PON" appears in the display.
To cancel vocal reduction, press KARAOKE PON/MPX again so that "PON" disappears from the display.

Notes on vocal reduction

The singer's voice may not be reduced completely for the following reasons:

- Monaural recorded source (Instruments may also be reduced.)
- Only a few instruments are playing in the stereo recorded source
- A duet is being played
- The source has strong echoes or chorus
- The singer's voice on the source deviates from the center
- The voice on the source is singing in high soprano or tenor

To Sing Along with Multiplex CDs or Tapes

You can sing along using the microphone while playing a multiplex CD or tape.

Press KARAOKE PON/MPX repeatedly until "MPX L" or "MPX R" appears in the display (choose left (L) or right (R) according to the encoding on your MPX software).
Then, you can hear your voice through the microphone and the instruments.

To hear both channels (the instruments and the recorded singer's voice)

Press KARAOKE PON/MPX repeatedly so that "PON", "MPX L" or "MPX R" disappear from the display.

If you press EFFECT ON/OFF or recall a sound effect with the MENU buttons

The Karaoke mode is cancelled.

Connecting Optional Equipment

For greater enjoyment of your stereo system, you can connect other components to the stereo. You can connect:

- a MD deck
- a DAT deck
- a VCR
- a microphone
- headphones
- a turntable
- a super woofer

continue to next page →

→ continued

Connecting an MD deck or a DAT deck

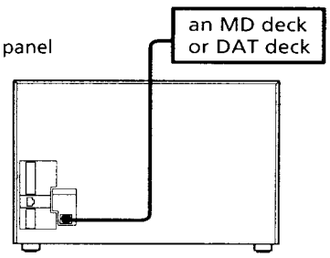
Select one of the following two connections, depending on the equipment to be connected and the method of recording.

- an MD deck or DAT deck for digital recording
- an MD deck or DAT deck for analog recording

To connect a MD deck or a DAT deck for digital recording

You can record from the CD into the MD deck or DAT deck digitally.

rear panel

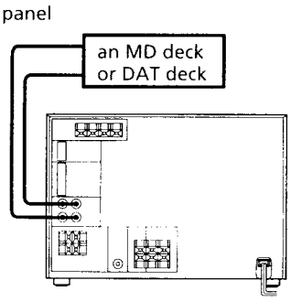


Connect	With
Digital IN jack of the MD deck or DAT deck	CD OPTICAL DIGITAL OUT using an optical cable

To connect a MD deck or a DAT deck for analog recording

You can record from the sound sources of the stereo into the MD deck or DAT deck in analog sound.
You can also listen to the sound from the MD deck or DAT deck by pressing the FUNCTION button repeatedly to select MD.

rear panel



Connect	With
LINE IN jack of the MD deck or DAT deck	VIDEO/MD OUT jacks
LINE OUT jack of the MD deck or DAT deck	VIDEO/MD IN jacks

Use audio cords and make sure to connect the plugs to jacks of the same color.
Then press FUNCTION to select the sound sources.

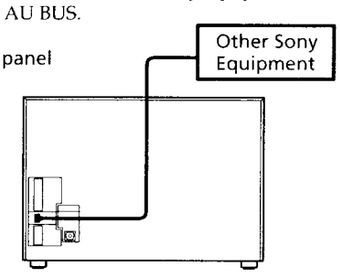
Note

If you cannot select "MD" by pressing FUNCTION, select "VIDEO" and turn the power off. Press SYSTEM POWER while holding down ENTER/NEXT and "VIDEO" will be switched to "MD".
To return to "VIDEO", do the same procedure.

To connect other equipment with an AU BUS jack

You can connect other Sony equipment with AU BUS.

rear panel

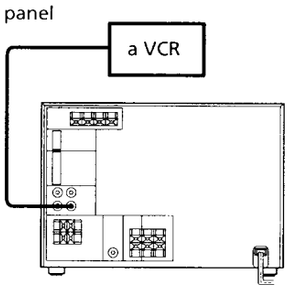


* You can use Automatic Source Selection, Synchronized Recording and Timer Recording with the connected equipment. However, these features may not be provided on some models.

Connecting a VCR

You can connect a VCR and hear the sound through the connected speakers.

rear panel



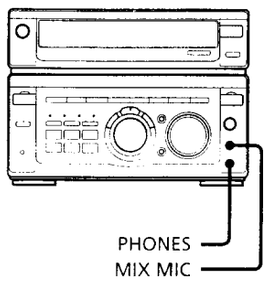
Connect	With
LINE OUT jacks of the VCR	VIDEO/MD IN jacks

Press FUNCTION repeatedly to select VIDEO.

Connecting a microphone or headphones

You can connect a microphone (phone jack) to the MIX MIC jack.
You can connect the headphones (stereo phone jack) to the PHONES jack.

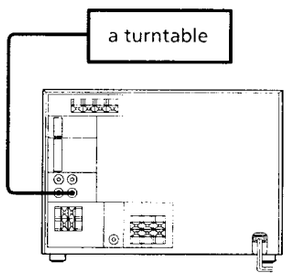
front panel



Connecting a turntable

You can connect a turntable to VIDEO/MD IN jacks.
Before you connect, check which type of turntable you have.

rear panel

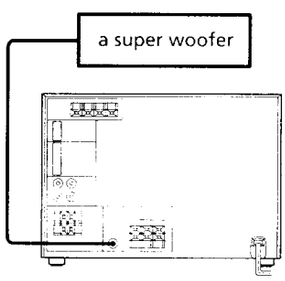


Is the turntable supplied with a phono equalizer?	Connect with
Yes	VIDEO/MD IN jacks
No	VIDEO/MD IN jacks using a MM cartridge equalizer and connecting cable (not supplied)

Connecting a Super Woofer

You can connect a super woofer to SUPER WOOFER jack.

rear panel



For Your Information

Precautions

Troubleshooting Guide

Maintenance

Specifications

Index to Parts and Controls

Index

Precautions

If you have any questions or problems concerning your stereo system, please consult your nearest Sony dealer.

On safety

- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Unplug the system from the AC power outlet if it is not to be used for an extended period of time. To disconnect the AC power cord, pull it out by the plug. Never pull the cord itself.
- Should any solid object or liquid fall into the component, unplug the stereo system and have the component checked by qualified personnel before operating it any further.
- AC power cord must be changed only at the qualified service shop.

Caution

The use of optical instruments with this product will increase eye hazard.

On installation

Place the stereo system in a location with adequate ventilation to prevent heat build-up in the stereo system.

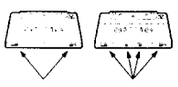
On condensation in the CD player component

If the system is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the CD player. Should this occur, the CD player will not operate. Remove the CD and leave the system turned on for about an hour until the moisture evaporates.

To save a tape permanently

To prevent a tape from being accidentally recorded over, break off the cassette tab from side A or B as illustrated. If you later want to reuse the tape for recording, cover the broken tab with adhesive tape.

When you are using a TYPE II (CrO_2) or TYPE IV (metal) cassette, be careful not to cover the detector slots which allow the tape player to automatically detect the type of tape.



Detector slots

In case color irregularity is observed on nearby TV screen

With the magnetically shielded type of speaker system, the speakers can be installed near a TV set. However, color irregularity may still be observed on the TV screen depending on the type of your TV set.

If color irregularity is observed...

Turn off the TV set once, then turn it on after 15 to 30 minutes.

If color irregularity is observed again...

Place the speakers farther away from the TV set.

Troubleshooting Guide

If you run into any problem using this stereo system, use the following check list. And first check the following points:

- The power cord is connected firmly.
- The speakers are connected correctly and firmly.

Should any problem persist after you have made the checks below, consult your nearest Sony dealer.

Tuner

"TUNED" flashes in the display.

→ Adjust the antenna.

"STEREO" flashes in the display.

→ Adjust the antenna.

Severe hum or noise.

→ Adjust the antenna.
→ The signal strength is too weak. Connect the external antenna.
→ Connect the ground wire.

A stereo FM program cannot be received in stereo.

→ Press STEREO/MONO so that "STEREO" appears.

Tape Player

The tape does not record.

→ No tape in the cassette holder.
→ The tab has been removed from the cassette.
→ The tape has reeled to the end.

The tape does not record nor playback or there is a decrease in sound level.

→ The heads are dirty. Clean them.*
→ Magnetic deposits have built-up on the record/playback heads.*

There is excessive wow or flutter, or the sound drops out.

→ The capstans or pinch rollers are contaminated.*

The tape does not erase completely.

→ Magnetic deposits have built-up on the record/playback heads.*

Noise increases or the high frequencies are erased.

→ Magnetic deposits have built-up on the record/playback heads.*

The sound recorded from optical equipment is distorted.

→ Change the function setting so that "MD" appears when pressing FUNCTION. To change "VIDEO" to "MD", select "VIDEO" and turn the power off. Press SYSTEM POWER while holding down ENTER/NEXT.

* See "Maintenance."

CD Player

The disc tray does not close.

→ The CD is not placed correctly.

The CD will not play.

→ The CD is dirty.
→ The CD is inserted label side down.
→ The player is in pause mode.
→ Moisture condensation has built up.
Leave the system turned on for about an hour until the moisture evaporates.

"NO DISC" is displayed.

→ There is no CD in the player.

Play does not start from the first track.

→ The player is in program or shuffle mode. Press PLAY MODE so that "PROGRAM" or "SHUFFLE" goes out.

General

There is no sound.

→ Turn VOLUME clockwise.
→ The headphones are connected. Disconnect them.

Sound comes from one channel or unbalanced left and right volume.

→ Check the speaker connections of the inoperative channel.

The left and right sound are reversed.

→ Check the speaker connection and speaker placement.

Bass is lacking or the location of the musical instruments is apparently imprecise.

→ Check the speaker connection for proper phasing.

There is severe hum or noise.

→ A TV or VCR is too close to the stereo system. Move the stereo system away from the TV or VCR.

"12:00 AM" or demo display flashes in the display.

→ A power interruption occurred. Set the clock, music clips, timer settings and tuner presetting again.

The remote does not function.

→ The batteries have run down. Replace both batteries.
→ There is an obstacle between the remote and the system. Remove the obstacle.

Restoring the Factory Settings

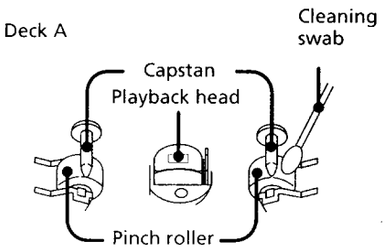
1 Turn SYSTEM POWER off.
2 Hold down both FUNCTION and ENTER/NEXT, then release.
3 Press MENU 3 within 2 seconds of releasing FUNCTION and ENTER/NEXT.

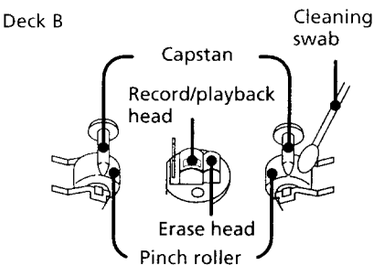
Maintenance

To clean the tape heads and tape path

Contaminated tape heads cause poor recording or sound drop-out in playback. We recommend cleaning after every 10 hours of operation.

Open the tape compartment and wipe the heads, the pinch rollers and the capstans with a cleaning swab slightly moistened with cleaning fluid or alcohol. Wipe the parts shown below:





Insert a tape when the areas cleaned are completely dry.

To demagnetize the tape heads

After 20 to 30 hours of use, enough residual magnetism will have built up on the heads to begin to cause loss of high frequencies and hiss. At this time, demagnetize the heads and all metal parts in the tape path with a commercially available tape head demagnetizer. Refer to the instructions of the demagnetizer.

To clean the cabinet

Use a soft cloth slightly moistened with mild detergent solution.

To clean the CD

When a CD is dirty, clean it with a cleaning cloth. Wipe the CD from the center out.

Notes on CD

- Do not use solvents such as benzene, thinner, commercially available cleaners, or antistatic spray intended for vinyl LPs.
- If there is a scratch, dirt or fingerprints on the CD, it may cause a tracking error.

Specifications

For the U.S.A. model

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 6 ohm loads, both channels driven, from 40 – 20,000 Hz; rated 100 watts per channel minimum RMS power, with no more than 0.9 % total harmonic distortion from 250 milliwatts to rated output.

CD player section

System: Compact disc digital audio system
Laser: Semiconductor laser (λ=780 nm)
Emission duration: continuous
Laser output: Max 44.6 µW*
*This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Wavelength: 780 – 790 nm
Frequency response: 2 Hz – 20 kHz (±1.0 dB)
Signal-to-noise ratio: More than 80 dB
Dynamic range: More than 90 dB
CD OPTICAL DIGITAL OUT
(Square optical connector jack, rear panel)
Wavelength: 600 nm
Output Level: –18 dBm

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range: 87.5 – 108.0 MHz (100 kHz step)
Antenna: FM lead antenna
Antenna terminals: 75 ohm unbalanced
Intermediate frequency: 10.7 MHz

AM tuner section

Tuning range
AM: 530 – 1,710 kHz (with the AM tuning interval set at 10 kHz)
531 – 1,710 kHz (with the AM tuning interval set at 9 kHz)
Antenna: AM loop antenna, External antenna terminals
Intermediate frequency: 450 kHz

Amplifier section

Continuous RMS power output
U.S.A. model:
(FRONT)
100 W + 100 W (6 ohms at 40 – 20,000Hz, 0.9% THD)
120 W + 120 W (6 ohms at 1 kHz, 5% THD)
(CENTER)
30 W (8 ohms at 1 kHz, 5% THD)
(REAR)
15 W + 15 W (8 ohms at 1 kHz, 5% THD)
Canadian model:
(FRONT)
120 W + 120 W (6 ohms at 1kHz, 5% THD)
(CENTER)
30 W (8 ohms at 1 kHz, 5% THD)
(REAR)
15 W + 15 W (8 ohms at 1 kHz, 5% THD)
Inputs
VIDEO/MD IN (phono jacks): voltage 250 mV/450 mV impedance 47 kilohms
MIX MIC (phone jacks): sensitivity 1 mV, impedance 10 kilohms
Outputs
VIDEO/MD OUT (phono jacks): voltage 250 mV/450 mV impedance 1 kilohms
PHONES (stereo phone jack): accepts headphones of 8 ohms or more.
FRONT SPEAKER: accepts impedance of 6 to 16 ohms.
CENTER SPEAKER: accepts impedance of 8 to 16 ohms.
REAR SPEAKER: accepts impedance of 8 to 16 ohms.
SUPER WOOFER: voltage 250 mV impedance 1 kilohms

Tape player section

Recording system: 4-track 2-channel stereo
Frequency response
(DOLBY NR OFF)
40 – 13,000 Hz (±3 dB), using Sony TYPE I cassette
40 – 14,000 Hz (±3 dB), using Sony TYPE II cassette
40 – 15,000 Hz (±3 dB) using Sony TYPE IV cassette
Wow and flutter: 0.1% WRMS ±0.3% (DIN)

Speaker section

Front speakers (SS-EX55P)

Speaker system: 3-way, bass-reflex type
Speaker units
Woofer: 17 cm (6 11/16 in.) dia., cone type
Tweeter: 5 cm (1 15/16 in.) dia., cone type
Super Tweeter: 2 cm (13/16 in.) dia., dome type
Rated impedance: 6 ohms
Dimensions: Approx. 225 x 410 x 295 mm (8 7/8 x 16 1/8 x 11 5/8 in.) (w/h/d)
Mass: Approx. 5.6 kg (12 lb. 5 oz.) net per speaker

Center speaker (SS-CN14)

Speaker system: Full range, magnetically shielded
Speaker unit: 8 cm (3 1/8 in.) dia., cone type x 2
Enclosure type: Bass reflex
Rated impedance: 8 ohms
Sensitivity: 88 dB (1W, 1m)
Frequency range: 95 – 20,000 Hz
Dimensions: Approx. 280 x 110 x 140 mm (11 x 4 5/16 x 5 1/2 in.) (w/h/d) incl. front grille
Mass: Approx. 1.7 kg (3 lb. 12 oz.)

Rear speakers (SS-SR12)

Speaker system: Full range
Speaker unit: 8 cm (3 1/8 in.) dia., cone type
Enclosure type: Bass reflex
Rated impedance: 8 ohms
Sensitivity: 87 dB (1W, 1m)
Frequency range: 95 – 20,000 Hz
Dimensions: Approx. 110 x 160 x 140 mm (4 5/16 x 6 5/16 x 5 1/2 in.) (w/h/d) incl. front grille
Mass: Approx. 740 g (1 lb. 10 oz.) per speaker

Supplied accessories

AM loop antenna (1)
Remote RM-SE3AV (1)
Sony SUM-3 (NS)-batteries (2)
FM lead antenna (1)
Speaker cords (5)

General

Power requirements: 120 V AC, 60 Hz
Power consumption
U.S.A. model: 260 watts
Canadian model: 350 VA
Dimensions
Amplifier/Tuner section: Approx. 280 x 205 x 345 mm (11 x 8 1/16 x 13 9/16 in.) (w/h/d)
Tape/CD section: Approx. 280 x 205 x 350 mm (11 x 8 1/16 x 13 3/4 in.) (w/h/d)

Mass
Amplifier/Tuner section:
Approx. 6.4 kg (14 lb. 2 oz.)
Tape/CD section:
Approx. 4.4 kg (9 lb. 11 oz.)

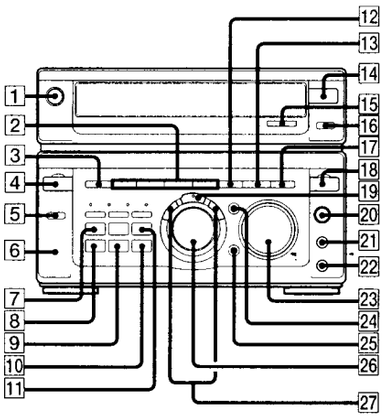
Design and specifications are subject to change without notice.

Index to Parts and Controls

Refer to the pages indicated in parentheses for details on how to use the controls. Controls with an asterisk have indicators on themselves.

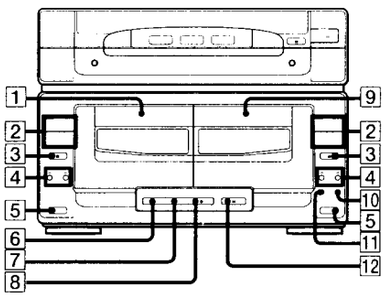
Front Panel

Amplifier/Tuner section



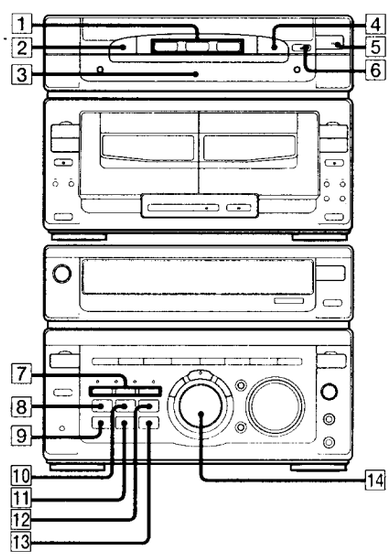
1 SYSTEM POWER button (7)
2 MENU 1-4 buttons (19)
3 EFFECT ON/OFF button* (20)
4 TIMER button* (6, 25)
5 SLEEP button (25)
6 KARAOKE PON/MPX button (27)
7 TUNER MEMORY button* (13)
8 CLOCK SET button* (6)
9 TIMER SET button* (25)
10 TIMER SELECT button* (26)
11 TUNING MODE button* (12)
12 P FILE button (22)
13 MEMORY button (22)
14 TUNER/BAND button* (12)
15 DOLBY PRO LOGIC button (24)
16 DISPLAY button (6, 8)
17 DSP button (21)
18 FUNCTION button (8, 15, 24, 28)
19 ENTER/NEXT button* (6, 9, 12, 17, 20, 24, 25)
20 MIC LEVEL knob (27)
21 MIX MIC jack (27)
22 PHONES jack (20, 28)
23 VOLUME knob (20)
24 DBFB button (20)
25 GROOVE button* (20)
26 JOG dial* (6, 12, 16, 20, 24, 25)
27 FREQUENCY +/– buttons (21)

Tape player section



1 DECK A (14)
2 ◁/▷ (forward/reverse side play) buttons* (14)
3 ■ (stop) button (14)
4 ◀◀/▶▶ (fast leftward/fast rightward) buttons (14)
5 ⏏ EJECT buttons (14)
6 CD SYNCHRO button (15)
7 HIGH SPEED DUBBING button (18)
8 ● REC button (15)
9 DECK B (14)
10 DIRECTION MODE button (14)
11 DOLBY NR button (14)
12 ❚❚ PAUSE button* (14)

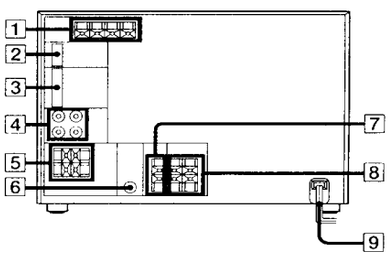
CD player section



1 DISC 1-3 buttons* (7)
2 DISC SKIP button (7)
3 Disc tray (7)
4 ⏏ OPEN/CLOSE/EX-CHANGE button (7)
5 ▷❚❚ (play/pause) button* (7)
6 ■ (stop) button (7)
7 CLIP A-C buttons* (10)
8 CLIP PLAY button* (10)
9 1/ALL DISCS button* (7)
10 CLIP ERASE button* (10)
11 PLAY MODE button* (8)
12 EDIT button* (16)
13 REPEAT button* (9)
14 ⏮/⏭ (search forward/search backward) JOG dial* (7)

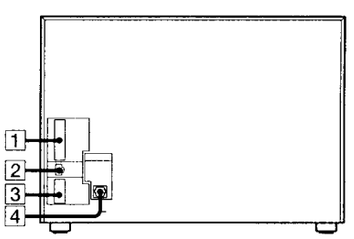
Rear panel

Amplifier/Tuner section



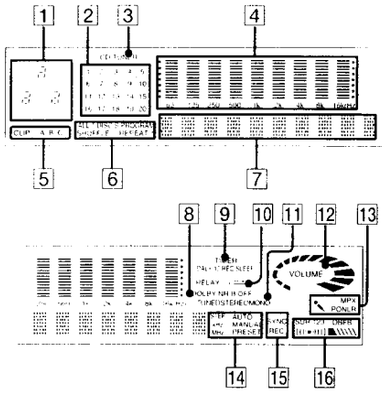
1 ANTENNA terminals (4)
2 SYSTEM CONTROL 2 terminal (4)
3 SYSTEM CONTROL 1 terminal (4)
4 VIDEO/MD IN/OUT jacks (23, 28)
5 FRONT SPEAKER connectors (4)
6 SUPER WOOFER jack (28)
7 CENTER SPEAKER connectors (4)
8 REAR SPEAKER connectors (4)
9 AC power cord (5)

Tape/CD section



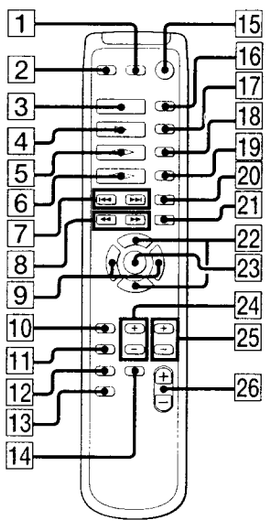
1 SYSTEM CONTROL 1 terminal (4)
2 AU BUS socket (28)
3 SYSTEM CONTROL 2 terminal (4)
4 CD OPTICAL DIGITAL OUT terminal (28)

Display Window



1 Disc tray indicator (7)
2 Music calendar (7, 13)
3 CD/TUNER indicator (7, 12)
4 Graphic Equalizer indication (21)
5 CLIP indicators (10)
6 CD playback indicators (7)
7 Multi-display (7, 12, 16, 21, 25)
8 DOLBY NR indicator (14)
9 Timer indicators (25)
10 Direction mode indicators (14)
11 Tuning indicators (12)
12 VOLUME indicators
13 Karaoke PON/MPX indicators (27)
14 Tuner indicators (12)
15 SYNC REC indicator (15)
16 DBFB/SUR indicators (20, 21)

Remote



1 FUNCTION button (8, 15, 24, 28)
2 SLEEP button (25)
3 TUNER/BAND button (12)
4 CD ▷ button (7)
5 DECK A ◁/▷ button (14)
6 DECK B ◁/▷ button (14)
7 I◀◀ /▶▶I/ TUNING +/– buttons (7, 13)
8 ◀◀/▶▶ buttons (8)
9 ◀/▶ buttons (20)
10 PROLOGIC ON/OFF button (24)
11 TEST TONE button (24)
12 DSP MODE button (21)
13 LOOP button (11)
14 DSP LEVEL button (21)
15 POWER button (7)
16 STEREO/MONO button (12)
17 CHECK button (9)
18 CLEAR button (9)
19 D.SKIP button (7)
20 ■ (stop) button (7)
21 ▮▮ (pause) button (7)
22 ▲/▼ buttons (20)
23 MUSIC MENU ON/OFF button (20)
24 CENTER LEVEL +/– buttons (24)
25 REAR LEVEL +/– buttons (24)
26 VOLUME +/– button (20)

Index

Adjusting
  the audio emphasis 21
  the sound 20
  the volume 20
Antennas 4
Batteries 6
CD player 7
CD synchro recording 15
CLIP play 10
Clock setting 6
Connecting
  optional equipment 27
  the antennas 4
  the power 5
  the speakers 4
  the stereo 4
  video equipment 23
Dolby NR (noise reduction) 14
Dolby Pro Logic Surround 23
Dubbing
  another tape automatically 18
  another tape manually 18
Graphic equalizer 21
Karaoke 27
Maintenance 30
Microphone mixing 27
Multiplex 27
Music calendar 7, 13
Normal play 7
One touch play 8, 12, 14
Parts identification 32
Playing
  a tape 14
  CDs (clip play) 10
  CDs (normal play) 7
  preset radio stations 13
  tracks in random order (shuffle play) 8
  tracks in the desired order (program play) 9
  tracks repeatedly (repeat play) 9
Precautions 29
Program play 9
Radio stations
  presetting 13
  tuning in 12
Recording
  a CD (program edit) 17
  a CD (time edit) 16
  a CD automatically 15
  a CD manually 15
  a radio 18
  another tape (dubbing) 18
  timer recording 26
Relay play 14
Repeat play 9
Restoring the factory settings 30
Saving a recording 29
Shuffle play 8
Sound adjusting 20
Speakers 4
Specifications 31
Supplied accessories 31
Tape player 14
Timer
  falling asleep to music 25
  timer recording 26
  waking up to music 25
Troubleshooting guide 29
Tuner 12